



**EDUCATION AND THE ECONOMY:
*Advocating Change***

HIGHLIGHTS AND RECOMMENDATIONS ONLY

*based on the results of eight M.I.K.E. Debates
held across the province
linking education and the economy*

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Phyllis Collier
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NOTE:

This document contains highlights of the Report. Full text and appendices will be made available to members only, by request.

1. EXECUTIVE SUMMARY

As the forum for collaborative action in Atlantic Canada, NovaKnowledge leads a network of members, volunteers, and participants who advocate for a strong, sustainable, and competitive knowledge-based economy in the region.

Our mission is to stimulate action across the region by working together to achieve our vision. The unique combination of neutrality, broad membership, diverse stakeholders, region-wide mandate, and focus on innovation and ingenuity, has made NovaKnowledge the only organization of its kind in Atlantic Canada.

The M.I.K.E. Debates provide a neutral and objective forum for dialogue that allows business, government, educators, and community stakeholders to come together, exchange opinions and explore ideas. The provocative input received is the foundation upon which NovaKnowledge builds action plans and sets targets for Nova Scotia's economic and social growth.

In 2006, NovaKnowledge held public debates to raise awareness and discuss "Education and the Economy," an important initiative given the challenges Nova Scotia's employers face with our province's ageing population and shrinking workforce. It is important that companies understand, and prepare, to meet the challenges head-on.

In the fall of 2006, NovaKnowledge's Knowledge Economy Report Card set out a challenge — that Nova Scotia will become a "Leader in Learning by 2011" — and a vision — that Nova Scotia will become the workplace people never want to leave. To achieve these ambitious objectives, the co-operation and collaboration of all stakeholders is fundamental. The responsibility lies with many groups, not just government, but employers, educators, organized labour, parents and individuals.

Nova Scotia faces the demographic challenge earlier than the rest of Canada due to the advanced age of our population and the significant flow of youth out of the province. This is what is generating our workforce and education challenges. Compared to provinces such as Alberta, who are gaining people and whose economy is flourishing, this means our province and our employers have fewer financial resources to deal with the problem. Conversely, it is easier to effect change in a crisis, and debate participants proposed that the business community take an ownership role, using scarcity as the enabler.

Human resources are the pivotal factor in knowledge economy growth and the competition for talent is global. All Nova Scotians must understand that learning is now life long and, as a province, we should strive to maintain critical mass in our universities and develop a balanced perspective. By developing and working to meet short- and long-term goals, Nova Scotia can become the province of choice for skilled workers by 2011.

Participants discussed the roles of various stakeholder groups, based on the understanding that any initiatives would be developed collaboratively. Some of the key suggestions follow. At the primary and secondary level of our public education

system, a focus on the basics is required; teachers are asked to be too many things for students. A shortage of computer science graduates is already holding Nova Scotia companies back and universities have a lead role in meeting the challenge. Getting youth interested in math and challenging each student individually were seen as examples of how to help meet future workforce requirements. Participants wondered how grade eight students could be expected to make informed education choices, and suggested better information for parents and stronger ties with business would help them. And, more importantly, participants said developing a lifelong learning mindset among youth is important; youth should see each decision they make as a next step on a career path.

Participants said companies should work closely with the NSCC to fulfill ongoing workforce training requirements for their employees, as many do. However, some debate participants did not see a clear way "in," they did not understand how to reach future employees, instructors, or principals of their local NSCC. The skilled trades attracted the most discussion around critical issues such as the perception they are not noble careers, the inclusion of more women, and the need to offer vocational training alternatives for at-risk students.

Participants wondered if we should amalgamate our universities, but there was no clear consensus, as many participants appreciate each university's unique contribution. Some suggested that universities could do a better job of communicating and building long-term relationships with local employers to improve their access to students far in advance of graduation.

Two issues that affect our education system are accountability for the quality of graduates and career counselling. Return on investment is important and participants said accountability measures should be incorporated into the system at all levels. Participants said career counselling is poor at each step of the career path; including both formal schooling and training requirements once employees enter the workforce. Participants also wondered where the 58% of students who graduate from high school but do not immediately go on to post-secondary education access career information once outside the education system.

Participants said employers need to plan ahead for human resource requirements. They need to continue to invest in staff, train middle managers to be better human resource managers, keep international students here, and be mindful of the increased skills required when considering productivity improvements through technology. Employers also need to develop clear youth attraction strategies. These strategies might include: involvement in post-secondary campuses, mentoring, cooperative education programs, and alternatives, developing relationships with students early - as young as grade six, and considering bringing high school students directly into entry-level positions. Successful strategies to reach small- and medium-size enterprises (SMEs) are required, participants noticed they were not well represented in our discussions and expressed concern because SMEs employ 80% of the Nova Scotian workforce.

We heard that government has a role to play in most of the activities and initiatives suggested. Participants identified the NS Department of Education as lead on literacy, with the support of employers and individuals. Increasing the number of co-operative employment opportunities is also seen as another key role for government.

Participants said the Department can also play a lead role in improving the current apprenticeship system. Recruiters called on government to give them more tools to work with, through policy development and reduced tax burden - resulting in a more competitive labour market environment.

Parents must support teachers, become more involved in the education of their children, and establish realistic workplace expectations in the minds of their children. Individuals, whether as children or employees, need to take charge of their own futures, understanding that they can design their own interesting and individual career path. We heard that given the option, most employees would seize the opportunity and blossom.

Communities province-wide face serious challenges and we heard that some have yet to focus on the workforce implications of an ageing population. Diverse, multicultural communities across the province are the key to maintaining rural population. We heard that these communities have a role in defining their own destinies. Once youth have left a community the first and best opportunity to retain them has been lost. Communities have to help young people build the communities and amenities they want, helping them become a part of the fabric that knits an individual to a community.

We heard varying opinions on the role of school boards. Some participants were very harsh and said school boards serve no useful purpose and should be disbanded. Others said communities need to be empowered to work with school boards. We also heard school board staff and elected representatives do not understand or value how much rural communities gain from these well connected resources.

To quote the 2006 Knowledge Economy Report Card: "A highly skilled, highly educated workforce is a cornerstone of the knowledge economy...Our goal of becoming an international leader in learning by 2011 is an ambitious one, but by focusing on educating tomorrow's workforce, we are poised to unlock the true potential of our province and set a new bar on innovation, competitiveness and prosperity."

1. NOVAKNOWLEDGE

2.1 WHAT IS NOVAKNOWLEDGE?

NovaKnowledge is a non-profit, non-partisan organization that has been promoting the knowledge economy in Nova Scotia since 1993.

Vision

As the forum for collaborative action in Atlantic Canada, NovaKnowledge leads a network of members, volunteers and participants who advocate for a strong, sustainable and competitive knowledge-based economy in the region.

NovaKnowledge serves as a hub, bringing together members and stakeholders with the common objective of charting a course for Atlantic Canada's future.

Mission

Our mission is to stimulate action across the region by working together to achieve our vision. This unique combination of neutrality, broad membership, diverse stakeholders, region-wide mandate, and focus on innovation and ingenuity, has made NovaKnowledge the only organization of its kind in Atlantic Canada.

NovaKnowledge provides a neutral space for dialogue among stakeholders and undertakes fact-based analysis and monitoring of important knowledge economy measures - innovation and productivity. This is accomplished through the Knowledge Economy Report Card, M.I.K.E. Debates, workshops, round tables, and action teams that set targets and identify initiatives required for improvement. Through these publications, events, and projects, NovaKnowledge raises awareness, communicates diverse perspectives, provokes policy debate, and focuses the attention of leaders in business, government, education, and community development on the challenges, opportunities, and actions required to succeed.

2.2 RATIONALE

The economy is becoming increasingly knowledge-intensive, driven by strong global competition and rapid technological change, with the cycle-time of innovation in products and processes becoming increasingly shorter.

In this context, policy makers and business leaders generally recognize the fundamental role of education and lifelong learning in the future of our economy. However, there are many respects in which the relationship between education and economic success is not sufficiently understood by business, or the general public. For example:

- The role of education as the foundation of society and of the economy is not well understood by the general population.

- The importance of a culture of learning and innovation is not fully recognized, even by business and government leaders.
- Among educators and the business community there is insufficient understanding of, and consensus around, the specific outcomes we should be achieving in education in order to improve our economic outcomes.
- There is a lack of dialogue between business and educators.
- There is insufficient flexibility in the education system to ensure the provision of training and education for individuals throughout their working lives.

2.3 OVERVIEW

Since 2000, NovaKnowledge has been examining the role of smart human resource practices and lifelong learning as they relate to the knowledge economy. Through ongoing initiatives such as our Report Cards, M.I.K.E. Debates and other projects, NovaKnowledge has addressed many issues surrounding education and lifelong learning, and the human resources required for a successful knowledge economy. We found that training is key to improved productivity within companies, and good human resource practices contribute to the bottom line.

If Nova Scotia is to build a strong workforce and compete effectively for human resources, then we must address systemic issues within the public education system, global competition for skilled and professional workers, public perceptions, and we must create interesting, well-paying opportunities for young people.

NovaKnowledge's intention was to build upon previous work by sharpening our focus on defined, measurable outcomes and stimulating informed discussion of the actions required to achieve them. We proposed to run a series of multi-stakeholder debates in Halifax and several locations across the province to explore the issues and debate the outcomes we should aim for, the actions needed to achieve these outcomes, and who holds the responsibility for taking those actions. These session results also provided background information for the preparation of a more detailed analysis in the 2006 Knowledge Economy Report Card.

3. PROJECT SCOPE

3.1 OBJECTIVES

The objectives of the debates were:

- To raise awareness of the impact of education and lifelong learning on the economy among target audiences in business, education, government, labour unions and community economic development.
- To debate and explore the outcomes we should aim for, the actions needed to achieve them, and where the responsibility lies for taking those actions.

3.2 TARGET AUDIENCES

The intended participants were private and public sector employers, educators, policy makers, labour union representatives, students and community economic development representatives.

3.3 EXPECTED OUTCOMES

- A better understanding among participants of the impact of education on the economy.
- Improved public awareness and understanding of the issues through media coverage of the debates.
- Exploration of, and at least partial consensus about, desired outcomes, actions required and responsibility for those actions.
- A “finger-on-the-pulse” reading of the stakeholders’ level of understanding and views on priority actions in preparation for the Report Card and follow-up activity.

3.4 OUR PARTNERS

Partners in this project with NovaKnowledge were the Nova Scotia Department of Education, the Nova Scotia Office of Economic Development, Michelin, Nova Scotia Community College, Saint Mary's University, and Acadia University.

NovaKnowledge consulted with staff of RDAs, and regional staff of NSBI and the Nova Scotia Office of Economic Development on potential panel members, mode of marketing, presentation, and marketing and sales strategy.

3.5 PROGRAM DETAIL

NovaKnowledge combined a series of M.I.K.E. Debates and a series of Environmental Economy Workshops which became the 2006 Road Show. Over 250 people representing more than 100 organizations were reached in eight sessions held in Halifax, Sydney, Port Hawkesbury, Stellarton, Wolfville, Bridgewater, and Yarmouth. Participants from a variety of sectors brought a broad range of perspectives to the dialogue.

3.6 LOCATIONS AND DATES

Debate 1: Halifax	May 2, 2006
Debate 2: Halifax	May 24, 2006
Debate 3: Sydney	June 27, 2006
Debate 4: Port Hawkesbury	June 28, 2006
Debate 5: Stellarton	June 29, 2006
Debate 6: Wolfville	October 19, 2006
Debate 7: Bridgewater	November 3, 2006
Debate 8: Yarmouth	November 8, 2006

4. WHAT WE HEARD FROM PARTICIPANTS

Over the course of eight debates held across the province, many common themes emerged, all calling for the development of strategies to enhance the process of education and lifelong learning, and the public education system, in the province. In this report the discussion and actions suggested by presenters and participants are organized by stakeholder group, and listed under the group that we believe is best positioned to take the lead role.

NovaKnowledge's 2006 Knowledge Economy Report Card sets out a challenge - that Nova Scotia will become a leader in learning by 2011, and a vision - that Nova Scotia will become the workplace people never want to leave. The co-operation and collaboration of all stakeholders is fundamental to achieve these ambitious objectives.

4.1 THE BROADER CONTEXT

Participants said stakeholders should come together to develop go-forward strategies. Some initiatives require a cultural shift, and while this may seem to be a daunting task, participants said the good news about changing attitudes is that small, consistent messages will bring issues to the tipping point. Here is what we heard:

The skills crisis is here - It is easier to bring about change when faced with a crisis and we heard that Nova Scotians should imagine what labour shortages will look like in five years and take steps to tackle such shortages now. Other participants said the crisis is now, and suggested steps such as improved human resource planning; business taking an ownership role in the education system; addressing the issue of recognition of immigrant credentials; formulating business plans that pay higher wages to compete effectively against other markets for talent; and considering how employment law may have to be amended to meet the challenges we face.

Use scarcity as an enabler - In one session, a panellist said scarcity could become a positive tool, encouraging stakeholders to be the best they can be. This can be achieved through collaborative development of strategic action plans; by talking to educators regularly; by encouraging young learners to experience the workplace; by offering accurate, compelling career information; by articulating clear training requirements; by hosting job fairs; by working with the education system to set and meet goals; and by asking government to create appropriate policy environments.

Recognize human resources can limit knowledge economy growth - Since 1998, NovaKnowledge has recognized and articulated this issue. What we heard is that participants believe Nova Scotia is well positioned to attract and retain the talent we require. Many see bright, young graduates coming to them looking for exciting opportunities, as well as extremely capable people from other jurisdictions with ties to the province seeking job

information regularly. Panellists and participants said there are industry leaders waiting for the right opportunities to return home, but it is up to stakeholders to create these opportunities and build this province into the workplace people never want to leave.

Business should take an ownership role in the education system-

Instead of leaving the issue of improving our education system solely in the hands of government and educators, business leaders articulated a need to be included in, and have an impact on, the system. There was general consensus that everyone has a role in ensuring the system's continued strength and relevance, and that it is not only up to those involved directly in the education system but also employers, individuals and parents working collaboratively.

Recognize the competition for talent is global - Nova Scotians generally recognize that we compete with Alberta for the top 5% of graduates, but don't always recognize that we also face international competition for these same graduates. Our employers must lead the charge for change, considering new strategies and developing new incentives to keep local, national, and international graduates here.

Bring all Nova Scotians to understand and value lifelong learning -

When people access education, for work or for their own learning, they are not only upgrading themselves, they are improving opportunities for their families, and improving the standard of living and capacity of the communities in which they live. The new term is "life-wide learning."

A cultural shift is required - A shift where we talk about *when* our young people go into post-secondary education, not *if*, as it is virtually impossible for anyone to participate in today's labour market without strong literacy skills or post-secondary education. An initiative to shift public attitudes encouraging all Nova Scotians to think differently about education to meet coming workforce challenges is required.

Build critical mass based on a balanced perspective - We must work smarter to attract and retain the "best of the best" so our economy remains competitive. Participants were quick to point out that this not only includes industry leaders, but post-secondary leadership as well. Nova Scotia is competing in a highly competitive global market for researchers and professors, as well as students. To encourage research and commercialization, as well as increased venture capital activity and placement - size matters. A broader, balanced perspective is important.

Plan for the long term - Nova Scotia's business leaders should decide where we want to be as a province, how we can achieve it and put plans in place. To do otherwise is irresponsible, jeopardizing the continued prosperity of Nova Scotians and the growth of the province's economy.

Change cultural perceptions - Business, educators, and community leaders should be much more strategic - carefully painting an accurate picture of local opportunities and communicating key messages. A teacher told one participant's school-aged son that Sydney's economy was built on the steel industry. Such cultural perceptions are holding us back. Other examples offered by participants included: you are a failure if you enrol in "trucker" math; successful people go to university; "losers" work in the trades; trades are not noble careers; if you are female you'll be breaking new ground in the trades; and "goin' down the road" is the path to success.

Correct information has to be gathered and disseminated. Unless our own perceptions change, we will never engage youth, expatriates, or anyone else we are trying to retain, or attract, to the province. Media outlets province-wide could be brought on as partners to shift these perceptions. Together, we can paint a more accurate picture.

Small and medium-sized employers were under represented - In two debates, participants noticed there were only a few SMEs represented. Participants wondered if there are particular approaches that we can use to reach them, to allow input and prepare to meet these challenges head-on. SMEs are very important to the province's economy, employing 80% of the workforce, and we must not overlook the barriers they face in dealing with workforce issues.

Participants also thought solutions that work for larger employers may not be acceptable for SMEs. There might be a role for industry sector organizations to bring SME perspectives to the table and government may have to provide funds to help these associations do this. SMEs are also least prepared to deal with this issue due to the limited resources they have at their disposal, but they will experience the largest impact - when a four-person organization loses one person it loses 25% of its resources.

Greater collaboration among stakeholders is required - Panellists and participants agreed that increased collaboration between government, employers, and educators is crucial for developing, attracting and retaining the talent we need to keep our companies competitive and maintain our economic prosperity. Participants recognize that educators and employers need to partner, but there is no natural conduit between employers and the system producing employees.

Together we need to build a system that meets the needs of business - To ensure the workforce for the 21st century evolves action is required by stakeholders. This includes: developing a "just-in-time" graduate delivery mindset so the right number of graduates with the right skills are graduating when they are needed; business and educators communicating regularly, allowing for opportunities to revisit learning requirements or revise the number of seats available; establishing achievable targets and meeting them; improving the ability of families to respond differently; and developing accountability metrics to measure the success of our education system.

4.2 PRIMARY AND SECONDARY EDUCATION - WHAT WE HEARD

Participants were very clear - they want educators to focus on the basics. They expressed concern that primary and secondary system educators are being asked to manage so many competing expectations that the emphasis on core competencies is lost.

Today's teachers are asked to be too many things to students – Most participants believe Nova Scotia's teachers are doing a great job with limited resources. Teachers act as mediators, psychologists, social workers, nurses and parents. They are asked to manage classrooms based on diversity, accommodating all learning abilities, and this is seen as important by participants. To be more successful, and to give organizations access to the human resources required to meet the challenges they face in a global knowledge economy, educators must be given the support, tools, and resources to focus on instilling essential skills in our young people and helping them to be the best they can be.

Participants defined the basics and they include soft skills. They said the basics include math, reading, writing, grammar, and communication skills. Other priority areas identified include soft skills such as critical thinking, teamwork, taking ownership of results, initiative, adaptability, innovation, problem solving and developing a learning mindset. They said life skills, such as physical fitness, and positive attitudes, including pride, enthusiasm and coping with change are important.

An understanding of the world economy and global competitiveness, and being able to link this back to an understanding of the need for constant change in the workplace, is important, as are interview skills such as the ability to provide examples of teamwork, leadership and express pride in a job well done. Only one in ten Nova Scotians who apply to Michelin North American (Canada) Ltd. are hired. Half the applicants do not pass a test at grade nine level math and English. In order to improve this statistic these basics must be achieved.

Recognize soft skills are now core skills - Participants underscored the growing importance of soft skills and believe teachers should strive to instill them in youth. Soft skills are attitudinal, including being positive, responsible, adaptable, motivated, and willing to learn; and behavioural, including work ethic, people skills, professionalism, teamwork and creativity.

Students need the ability to transfer learning, which is seen as fundamental as instilling other workplace values, like the desire to work hard. Participants also believe the social environment created by diversity in classrooms is important, but were quick to point out that standards cannot be lowered to a common denominator. Strategies should be put in place to meet students' individual needs wherever they fall on the spectrum and the resources to fund the strategies must be appropriate.

Teachers and career counsellors need more exposure to the business world - From early childhood through to employment, many teachers have spent their entire lives in school, meaning most have a limited understanding of the demands and opportunities graduates will encounter in the workforce. Participants said we should inspire our teachers and provide them, and career counsellors, with opportunities to gain in-work experience from Nova Scotia's employers. Teachers and counsellors will then understand the demands placed on local businesses in an increasingly global environment.

Get youth interested in math - Getting youth interested in math and computer science is another priority. The province requires more IT graduates every year, yet enrolment is down. How will we increase the numbers? Strategies to improve uptake must not only include getting youth interested in math and computers, but communicating the salaries and career opportunities available provincially.

Challenge youth - Participants said we should reconsider the education model. Creating an environment where students become passionate about learning is key. We heard the current model was developed by academics, for academics. By working with students to develop individual learning plans and set individualized outcomes, students will become more engaged. This will also help to close the gap for at-risk students. It is important to seek and implement best practice and new alternatives, encourage parental input and build links into local communities to foster success. The Edmonton, Alberta education system was held out as an innovative and successful model.

Should we expect Grade Eight students to make informed choices - It is up to educators, supported by employers and parents, to help students see the choices they make as a next step on a diverse career path, rather than being pigeon-holed for the rest of their life. Once a student realizes this, they will embrace the notion of lifelong learning and strive to build on strengths and interests as they go forward. There are materials and tools available to help students understand their passion and these tools need to be close at hand.

Updating our public education template - We heard that Nova Scotia's education system is based on a 200-year-old model developed for the industrial age, not the information age. It is designed to allow a small percentage of students to excel, discouraging innovation and average students from achieving excellence. The system also provides a learning environment more amenable to girls, with boys expected to conform to ways that do not meet their learning style. Session participants emphasized the importance of innovation and excellence as key to success in the knowledge economy, allowing us to effectively compete in the global marketplace.

Entrepreneurship is seen as a strong alternative to employment in Nova Scotia - We heard that educators and employers could work together to put a more positive spin on entrepreneurship. By showcasing successful entrepreneurs, and communicating that you can be self employed and raise a family in Nova Scotia, our youth may make the choice to become entrepreneurs. Junior Achievement programs are seen as a great place to start, and participants said we should ensure there is such a program in every provincial high school. We heard that by retaining our brightest and best as entrepreneurs we are cultivating intellectual advantage, the smart ones will become entrepreneurs and make it here.

4.3 NOVA SCOTIA COMMUNITY COLLEGE - WHAT WE HEARD

The NSCC received very positive feedback. Participants applauded the changes the College has made and look forward to a continuing strong relationship.

The NSCC is seen as a partner in education - We heard that employers find it very beneficial to work closely with the NSCC, advising the College on updating curriculum, hiring graduates as apprentices, and assisting College staff when interviewing instructors. When questioned about the requirements of technical training and Red Seal approval, we heard member said graduates coming to businesses in the trades are immediately employable.

Improve access to NSCC staff and students - Some employers expressed concern about access to the College's instructors and to potential graduates, saying they did not know who to contact or how to get in touch with students they may want to hire. Others wondered if there were career counsellors at each NSCC campus. It is clear that principals and instructors should develop stronger ties with the local business community, labour unions, and local industry sectors organizations representing businesses where graduates will find work.

Attract more women into the trades - This is seen as a priority. Currently, only 50% of Nova Scotia's workforce, *men*, consider the trades a career option. We have to strive to improve the appeal of the technical trades to women and build partnerships with NSCC and NS Department of Education to promote these roles to female high-school candidates.

Improve the appeal of careers in the trades - Jobs in the trades are seen as having limited advancement opportunities, not as careers. This has to change and we must also be mindful that some of the brightest and best are needed in all the trades. We also need to recognize and foster entrepreneurship because a high percentage of self-employed individuals come through trades programs.

Some myth-busting could be used here. In most cases, young people working in the trades earn good money, have good benefits, and see that

there is a career path, often to self-employment. The discouraging part is that youth in general do not see these careers as attractive, too few women work in the trades, and our aboriginal populations are largely untapped.

In order to change the mindset that skilled labour is unattractive, employers, and educators need to speak with a united voice. NSCC, in partnership with employers, labour unions, and government stakeholders, could undertake initiatives to portray the trades in a positive light, as good career opportunities. As partners set out to build strategies to effect change they should also recognize that this is not only a Nova Scotian issue, it is a Canadian issue, and the underlying challenge is changing our sense of entitlement.

Reinstate the vocational school - Many feel there is a gap that exists in the education system and participants suggested reinstating vocational training will help meet the needs of at-risk students, as well as the needs of employers. There seems to be a perception that academics are developing the system and placing too much emphasis on academic career paths. It was suggested that the NSCC could get employers involved and develop an initiative to advocate for vocational skills training. In Sydney we heard there is a vocational school in Cape Breton and it has been successful, with applications outpacing available spaces. Perhaps the model exists and it is only a matter of bringing more schools of this type on line.

4.4 UNIVERSITIES - WHAT WE HEARD

Overall, participants see our universities as our greatest strength, giving Nova Scotia a position of advantage in the knowledge economy. Generally we believe participants' limited focus on universities mean they are doing a good job. Statistics from the Gardner Pinfold study put the contribution of our universities at \$2.08 billion per year to the Atlantic economy.¹

University education is very expensive - We heard that entry-level salaries are not high enough in Nova Scotia to allow students to reduce their debt quickly and that is why they leave. By recognizing this, employers should clearly see the risk in under-compensating new graduates.

Should we consider consolidation of our universities? - Nova Scotia has 11 post-secondary institutions - a significant number given our low population base. While most participants agree this high concentration has given us double the number of post-graduate students of any Canadian province, they also believe our universities need to change, to strengthen their focus and specialization to stay viable. Yet there is disagreement over how it should be done.

¹ The economic impact of universities in the Atlantic Provinces, Gardner Pinfold Consulting Economists, February, 2006.

Some participants suggested these institutions be consolidated into one provincial university; others said we should be proud of the significant and unique contributions our institutions make to the communities they serve and market them better internationally. For example, we heard Acadia University in Wolfville, NS, represents 60% of the local economy, yet struggles to fill vacant seats with international students on a \$500,000 marketing budget. Perhaps members of the local business community should be contributing to the marketing campaign.

Build stronger relationships with business - Comments we heard suggest universities could do a better job of building long-term relationships with employers and of encouraging Nova Scotia businesses to meet with graduates far in advance of graduation. Several examples were cited of the best students being recruited from outside the province, or outside the country, before local employers were able to meet them.

4.5 CAREER COUNSELLING & ACCOUNTABILITY - WHAT WE HEARD

Career counselling needs to be improved and participants are interested in seeing a better return on their investment in education and training, as well as more accountability measures built into the system.

Career counselling needs improvement - In every session, participants articulated the need for improved career guidance at each stage of an individual's education. Current employment opportunities are poorly communicated to high-school students and their parents. Participants said the career counselling system in place is inadequate, but offered little input on what needs to be done, other than increasing business involvement in schools. Participants also wondered how the 58% of students who do not choose any form of post-secondary education immediately upon graduation are accessing information and career guidance.

We heard that the Nova Scotia Teachers' Union has developed a program and incentives for Guidance Counsellors to upgrade their training. We also heard that the NS Department of Education is currently doing a pilot project to help parents understand the opportunities available to their children and to learn how to offer better career guidance. Employers were interested to hear the results. As well, we heard that promotion of women in non-traditional careers is important.

Require accountability for graduate outcomes - This topic was raised in most debates, with participants saying that we should be seeing better results for our investments in education. We heard that while Nova Scotia exists in a highly competitive global economy, the same could not be said for our P-12 school system. We heard the education system is closed - a public-sector monopoly with no penalties for failure and few rewards for success. Participants said Nova Scotia is one of only four provinces without competing publicly funded education options, and some participants wondered if this lack of competition for the best students is why the

province ranks among the bottom four in national performance assessments. There was little discussion around how to achieve accountability in the current system.

4.6 EMPLOYERS - WHAT WE HEARD

The future will be very different for employers. According to Dr. Jim McNiven, a presenter during the 2006 Knowledge Economy Summit, the shortage of human resources is the new reality and will not go away *in our lifetime*. Employers will be required to plan ahead, recruit youth in new and different ways, such as reaching down to the high school level, building corporate profile and strong relationships with university students, and increased staff training to meet the needs of new technology, implemented to build productivity.

Plan ahead for human resource requirements - Due to the response time required to meet staffing objectives, it is imperative that employers begin to look at their future needs in order to ensure the right programs are being offered and that students are recruited and trained in time to meet those needs. We heard this is particularly important for SMEs, which employ 80% of Nova Scotians, yet participants noted there were few small employers present and wondered how we reach out to them.

Develop a clear youth attraction and retention strategy - Anecdotal evidence suggests that there is more awareness of Alberta-based career opportunities among our youth than opportunities in Nova Scotia. We also heard, anecdotally, that University of Waterloo graduates do not think about Atlantic Canada for employment opportunities; they only look west. Doing what we have done in the past to manage human resources is no longer appropriate. The supply will no longer meet demand. What follows are suggestions from presenters and participants about what business must do to meet these new challenges, with most centred on keeping our youth in the province.

Tactics suggested include:

- **Employers extending their involvement in the province's post-secondary campuses** – Participants said these relationships should extend it to junior and senior high schools to better promote local companies and career opportunities to youth. Participants said we can target younger students by placing more emphasis on initiatives such as “take a student to work day” and exposing them to local workplaces at a younger age - even in their senior elementary years. Continuing exposure to different work environments will allow Nova Scotia's youth to explore opportunities locally and see themselves on a career path - one that keeps them in Nova Scotia.

We also heard that once engaged it is imperative that employers communicate the career paths and opportunities they see for these young employees, helping to address their succession planning strategies.

- **Mentoring** - This is another important tool to help young people understand and navigate the work world. Employers should encourage as many staff as possible to take a mentoring role with youth. It offers young people the opportunity to be exposed to a business person, to experience the workplace, and to understand the roles and responsibilities associated with various career choices. It also begins building a relationship between the student and the employer — a tool for reaching future employees before they complete high school.
- **Co-operative education programs** - We heard Nova Scotia businesses have been involved in co-op and apprenticeship programs for many years. It is the sole recruiting practice for some organizations. Co-op employment opportunities for youth have always been held up as a great opportunity for businesses to showcase themselves to potential employees. As well, co-op placements offer employers the opportunity to assess a candidate's fit with the organization.

Can business afford more co-op placements? - During one discussion, co-op placements were suggested as a means to augment less-than-adequate career counselling. An employer in that group said they limit the number of co-op placements because it is too expensive. Other employers agreed, saying they limit their support because co-op students are not highly productive, making the program too expensive for them to support.

Consider an alternative to co-op programs - We heard that a Junior Achievement program developed and offered in the United States may serve as an affordable alternative to co-op placements. In this program, business leaders deliver a 5-10 session curriculum in the school, allowing them to meet young people, cite industry examples, and offer future employees exposure to their business through the classroom. Participants in most debates said the Junior Achievement programs we have are excellent and the Economics of Staying in School (ESIS) program does a good job of exposing students to business leaders as well as the world beyond school.

- **Help students reduce debt load faster** - We heard that companies have to pay better starting salaries to help students reduce their debt load faster. By taking this into account with a long-term view and by realizing how many students we are forcing to leave, employers should quickly realize they cannot afford to under-compensate youth.
- **Move high-school graduates directly into entry-level positions** - Employers could create opportunities to take high-school graduates directly into entry-level jobs, offering training modules as they advance, growing the labour pool by recruiting them early, and keeping them in Nova Scotia.

- **Keep international students here** - New immigration guidelines allowing international students to work off-campus, offering employers the opportunity to bring them into their organizations and build a relationship so these young people will consider staying in the province. Local employers need to recognize universities have relationships with, and can provide direct access to, these young people.

Continuing education and training is important - Employers across Nova Scotia place considerable emphasis on hiring the best and brightest, yet it appears they are not making a substantial effort to nurture employee growth after recruitment. Participants said employers should view an investment in education and training as an investment in both their organization and their community.

Companies should focus more energy and resources (at least 2-3% of budget) on workforce development to ensure that their employees remain the best and brightest, even 25 or 30 years later. Employers that make this investment will enjoy increased employee productivity and loyalty. Louis Couthino, Human Resources Manager with the Halifax Regional Municipality, said “Nobody hires deadwood. But everyone says their companies are full of it. This is because employers fail to invest in ongoing skills development for these bright sparks, turning them into deadwood along the way.”

Train middle managers well - As in implementing any strategy, employers must strive to train managers to better articulate expectations, helping new employees to understand their roles and that they will be held accountable. With the competition for people, employers have to be better at human resource management and clearly set out expectations in order to be considered employers of choice. Participants also agreed there should be more effort to train managers to recognize and support lifelong learning opportunities for the employees they supervise.

Productivity improvements through technology require better educated staff - Improved productivity through automation was identified as one strategy to deal with workforce shortages. Participants recognized that improving technology also requires improving employee skills, which means higher wages and a smaller pool of qualified workers. We heard it is the business case that dictates the implementation of technology upgrades, and if the competition is from China it is a tough case to make.

4.7 GOVERNMENT - WHAT WE HEARD

Throughout the M.I.K.E. Debates, participants articulated issues and assumed government would be partners in dealing with most of the issues raised. There was a strong desire for employers to come together and collectively influence government policy and timelines on the following issues:

Improve literacy levels among Nova Scotians - The issue of workplace literacy was discussed in almost every session, especially in those regions of the province where manufacturing and processing operations exist. It is an important topic with huge ramifications for all Nova Scotians and solving the challenge is expensive. However, Nova Scotia's GDP can be linked to literacy rates, directly impacting the prosperity of our province. Companies are encouraging staff to improve literacy skills and most have a policy of not accepting someone with less than grade twelve to ensure our youth stay in school. We also heard that 50-year-old people working in the trades often find conditions too tough for them, but retraining often means literacy training.

We heard that the percentage of the population who have low literacy rates are often articulated, but what do they really mean? It means 75,000 Nova Scotians meet Level 1 prose literacy and that 168,000 meet Level 2 prose literacy. Level 3 prose literacy is seen as the norm, with Levels 4 and 5 including our best educated. People at Levels 1 and 2 prose literacy struggle to read the written word at a time when a well-educated workforce has never been more valuable. We heard that financial support for workplace literacy is limited - approximately \$500,000 per year - and that half of the people in the workforce who have Level 1 and 2 prose literacy rates will not find other employment if their job disappears.

Simple calculations based on this information were performed and the results are contained in the table below. From an employment perspective, can we afford to allow almost 133,000 people to remain at these literacy levels? As well, when people lose employment they move to social assistance roles - an estimated 66,000 are at risk. More importantly, how do we reach them? Many do not realize the skills they possess are poor.

Literacy Level	Nova Scotians at this level	% who are employed	# employed with low literacy	50% at risk if they lose their job
Level 1	75,000	47%	35,250	17,625
Level 2	168,000	58%	97,440	48,720
Total	243,000		132,690	66,345

The apprenticeship system is cumbersome - The system was criticized, and seen as being cumbersome, with trade qualification issues highlighted. The issue of one journeyperson supervising more than one apprentice in these times of shortfall was raised. Apprenticeship is seen as one way to recruit new employees into a company, with each having the opportunity to evaluate the other during the apprenticeship. We heard the Nova Scotia Department of Education is undertaking a review of the province's apprenticeship system, but others were not aware of this.

Offer tax incentives to help students reduce debt quickly - We heard that student debt has to be dealt with by government and the universities. Entry-level salaries are not high enough to allow students to reduce their debt quickly, and that is the main reason why many students go elsewhere. In order to retain our new graduates government should put tax incentives in place allowing debt to be reduced or eliminated in four or five years.

Increase co-operative education opportunities for students - It was suggested government could make co-op placements a priority, reducing the financial burden of co-op placements in the hope that more students would gain access to future employers. It was then pointed out that, in small business the issue is not only money, but also finding enough staff to offer adequate coaching and supervision so students have a positive learning experience.

Give recruiters more tools to work with – While quality of life is often touted as strength in terms of attracting talent, Nova Scotia’s recruiters said they need more competitiveness tools, giving employees added incentive to stay or locate here. In Quebec, for example, life sciences professionals recruited from out of province enjoy a five-year tax break on the provincial portion of their income tax.

Another reason why employees are lured away is that they have more money in their pockets at the end of the day. For example, the gap between Nova Scotia and Alberta in terms of tax differential is expected to increase over the coming years. The provincial government will have to improve the provincial debt and take steps to reduce personal and corporate tax to keep Nova Scotia competitive.

4.8 THE PARENT - WHAT WE HEARD

Participants said parents have a role in supporting teachers and should have more involvement in their child's education.

Teachers need the support of parents - We heard it is often the parent who makes it impossible for a teacher to teach a child. By aligning their support with teachers' expectation parents can ensure young people are prepared to meet the expectations of employers. Also, parental pressure on teachers to be lenient regarding late assignments or to pass students who don't meet performance standards is counter-productive.

Increase parent participation in education - To change the system we not only have to change the attitudes of government and educators, but also those of parents. Better communication between home and school may educate and encourage parents to play a more active role, from ensuring their children are completing assignments on time to encouraging them to access post-secondary education. Some participants wondered if parents are actually taking adequate time to parent.

We heard that the NS Department of Education is piloting a program to help parents understand the curriculum decisions their children need to make as well as the implications, to provide them with tools to guide their children, and assist with career counselling.

Acknowledge the game has changed - We have to recognize that a culture of entitlement exists. When this sentiment was raised in a session, participants agreed that we have collectively created a generation that gets what they want with little effort. Parents, educators, and career counsellors should work to help students understand they will be required to do a lot for an employer.

Set realistic expectations for children - This is an important role for parents. Young people often have an attitude of entitlement, expecting to draw high salaries and benefits very early in their employment experience. It is important that parents talk to their children about the opportunities available, and help them develop realistic expectations of both their employers and the positions they will hold. Young people must understand they will have to work hard for their employers, and parents also need to advise their children that university is not the only option. We heard that the Department of Education is developing material to help parents become better career coaches for their children.

4.9 THE INDIVIDUAL - WHAT WE HEARD

Take charge of their own futures - In order to meet coming challenges, Nova Scotians need to get creative and do whatever it takes to help retain and improve our workforce. Individuals should be encouraged to take charge of their futures, and stakeholders should be asking how they can help. This is part and parcel of the development of a learning culture among Nova Scotians.

4.10 SCHOOL BOARDS - WHAT WE HEARD

School boards are a well-connected rural resource - In many rural areas, school boards are the largest employers and single biggest property owners, leaving them with more connectivity to the community than any other organization. Yet they are not engaged in, or thinking about, community development. Rural residents need to educate and engage school board officials and administrative staff to become partners in community development.

Are school boards relevant? - School boards were seen by many as ineffective, and changes to encourage parents to play a stronger role would be seen as very positive. This comment was first heard in a rural area in June - before the validity of the Halifax Regional School Board media focus. The issue came up in the fall debates as well, with participants advocating for the reorganization, consolidation, or elimination of school boards.

4.11 RURAL COMMUNITIES - WHAT WE HEARD

Once youth leave the best opportunity to keep them here is lost -

Everyone needs to invite young people to voice their opinions and listen to them. If youth share positions of leadership and become connected to the broader community, they are more likely to stay. Communities should challenge youth to explore and solve the issues that affect them in their communities and give them a lead role in creating the amenities it takes to keep them there.

Recognize that immigrants in rural communities are disadvantaged -

We heard that because of the closed social infrastructure and the limited social networks that exist in rural communities immigrants may have difficulty integrating. These barriers can be overcome through workforce sensitivity training and, once recognized; employees will take the time to understand what has to be put in place to meet immigrants' needs.

5. RECOMMENDATIONS

5.1 RECOMMENDATIONS FROM PARTICIPANTS

The Broader Context

- The skills crisis is here;
- Use scarcity as an enabler;
- Recognize human resources can limit knowledge economy growth;
- Business should take an ownership role in the education system;
- Recognize the competition for talent is global;
- Bring all Nova Scotians to understand and value lifelong learning;
- A cultural shift is required;
- Build critical mass based on a balanced perspective;
- Plan for the long term;
- Change cultural perceptions;
- Small and medium sized employers were under represented;
- Greater collaboration among stakeholders is required; and
- Together we need to build a system that meets the needs of business.

Primary To Grade Twelve - What we heard

- Today's teachers are asked to be too many things to students;
- Recognize soft skills are now core skills;
- Teachers and career counsellors need more exposure to the business world;
- Get youth interested in math;
- Challenge youth;
- Should we expect Grade Eight students to make informed choices?
- Update our public education template; and
- Entrepreneurship is seen as a strong alternative to employment in Nova Scotia.

Nova Scotia Community College

- Nova Scotia Community College is seen as a partner in education;
- Improve access to NSCC staff and students;
- Attract more women into the trades;
- Improve the appeal of careers in the trades; and
- Reinstate the vocational school.

Universities

- University education is very expensive;
- Should we consider consolidation of our universities; and
- Build stronger relationships with business.

Career Counselling & Accountability

- Career counselling needs improvement; and
- Require accountability for graduate outcomes.

Employers

- Plan ahead for human resources requirements;
- Develop a clear youth attraction and retention strategy;
- Continuing education and training is important;
- Train middle managers well;
- Keep international students here; and
- Productivity improvements through technology require better educated staff.

Government

- Improve literacy levels among Nova Scotians;
- The apprenticeship system is cumbersome;
- Offer tax incentives to help students reduce debt quickly;
- Increase co-operative education opportunities for students
- Give recruiters more tools to work with

Parents

- Teachers need the support of parents;
- Increase parental participation in education;
- Acknowledge that the game has changed; and
- Set realistic expectations for children.

Individuals

- Take charge of their futures.

School Boards

- School boards are a well-connected rural resource;
- Are school boards relevant?

Rural Communities

- Once youth leave the best opportunity to keep them here is lost; and
- Recognize that immigrants in rural communities are disadvantaged

5.2 RECOMMENDATIONS FROM COMPLETED ACTION LIST HANDOUTS

At the conclusion of each debate, participants were asked to provide NovaKnowledge with a list of three priority actions. Results focused on workforce issues as well as education and lifelong learning issues, and the list of participants' recommendations follows:

Recommendations relating to education issues:

- Upgrade the literacy levels and skills of the current workforce;
- Form a provincial working group, bringing together key stakeholders, such as employers, government, school boards, labour unions, post-secondary institutions and economic development agencies, to develop strategies to meet the challenges; and
- Improve the school-to-work transition for youth through education, exposure to the business environment and improved career counselling.

Recommendations relating to workforce issues:

- Seek and engage alternative talent pools;
- Welcome immigrants. Improve the societal transition and integration experience, recognize credentials, and improve workforce integration overall;
- Promote job opportunities in Nova Scotia to our youth and expatriates; and
- Promote investment in technology and innovation as a means to enhance productivity, while reducing the need for more workers.

5.3 NOVAKNOWLEDGE RECOMMENDATIONS

The 2006 Knowledge Economy Report Card states "A highly skilled, educated workforce is a cornerstone of the knowledge economy."

In order to ensure Nova Scotia becomes a "Leader in Learning by 2011" we will monitor progress and pursue the following recommendations through Workforce and Learning Action Committees, events, and publications.

NovaKnowledge will seek the support and resources to address and monitor the following issues to ensure:

- Nova Scotians realize that education is the foundation of society and of the economy, understand the importance of a culture of learning, and link innovation to prosperity;
- processes that facilitate dialogue between business and educators are developed;
- economic outcomes are improved through targeted achievements in education outcomes;
- literacy levels and skills of our current workforce are improved;
- accountability measures and annual reporting mechanism are in place across the education system, including universities and the community college;
- training and education opportunities are available to every Nova Scotian throughout their working lives, regardless of where they choose to live or work;
- the school-to-work transition for youth is improved;
- the effectiveness of school boards, and their connectedness to the communities they serve, is improved; and
- funding is established to support and tax incentives for business that will foster the adoption or adaptation of new technologies and processes, to increase productivity and reduce the dependence on skilled workers; and
- government strives to reduce tuition fees or increase tax incentives to reduce the cost of university education.