Changing Landscapes

in co-creating a Learning Alberta









Shaping a Preferred Future 2011-2031





Co-creating a Learning Alberta

This publication is part of a sustained commitment for engaging Albertans in a public dialogue about our shared future. This document identifies seven trends impacting four domains of our lives here in Alberta: individuals, relationships and community; work and the economy; governance and politics; and emerging technologies.

How did this publication come about? Beginning in 2004, the Alberta Teachers' Association (ATA) hosted a series of public lectures and invitational symposia focused on the role that public education will play in co-creating the future of Alberta. At different times, these public dialogues have been co-sponsored by various community partners: the Creating Tomorrow Foundation, the Faculty of Education of the University of Calgary, Cambridge Strategies, Literacy Alberta, and the Calgary and Edmonton Public and Catholic Locals of the ATA among others. With many of the same issues and concerns connected to the ATA's Real Learning First initiative, these conversations were infused in public meetings held in a number of communities including Lethbridge, Red Deer, Grande Prairie, Peace River, and Okotoks. See reallearningfirst.ca.

Strategic foresight

Over the past years, three questions have come to dominate the conversations about the future of the province:

- What is the Alberta that the world needs to see?
- What kind of Albertans do we need to become to get us there?
- How will leadership in learning help us become our best selves?

As you review this document, including the seven trends outlined on the reverse side, it is important to consider these three questions neither as problems to be solved nor challenges to be feared. Rather, they are the points of departure for an engaging dialogue we need to share in as Albertans poised on the cusp of becoming leaders in learning and innovation in the world.

For more background information about this publication and the partnership with forward-thinking Albertans, visit learningourway.ca or contact J-C Couture at jc.couture@ata.ab.ca or 1-800-232-7208.



Learning our way as aspiring Albertans

population is a visible minority.

What it means to be an Albertan will remain an open text. For example, Alberta's student population is expected to increase by 100,000 (from 600,000) before the end of the decade, bringing growing diversity and complexity to our school communities. Currently, Calgary's thriving economy makes it home to more immigrants per capita than Montreal – nearly a quarter of the

Since 2004 when these public dialogues began, over 5,000 forwardthinking Albertans have contributed their ideas and passion to the conversations. The most recent events, in March 2011, at two meetings in Edmonton facilitated by Stephen Murgatroyd, a new chapter was written in the unfolding story of the journey to the next Alberta. In the evening public lecture Learning Our Way as Aspiring Albertans, which focused on generational and cultural patterns of change, the psychologist Jean Twenge warned the audience about what happens when our love and caring for our children goes off balance resulting in an epidemic of self-admiration and self-gratification, fuelled by growing consumerism and social media in our current "age of entitlement". In stark contrast to the image of these overly indulged youngsters in our society, 77,595 Alberta children are living in families below Statistics Canada's Low Income Cut Off. This means one in seven children in Alberta live below the poverty line.

Michael Adams gave participants an overview of Alberta and Canada based on his research over a number of years. As Canadians, we value our "freedom to" and "freedom from", especially if we are foreign-born. We see a central role for government in issues such as narrowing the gap between rich and poor. All in all, Albertans must commit to a spirit of readiness and can-do as we face the complex issues in our future.

Transformation through international partnerships

In responding to Twenge and Adams, Pasi Sahlberg of Finland linked their presentations to issues such as personalization of learning, which is done in the "collaborative mode" in Finland, and school choice, which challenges us to increase the capacity of students to find their individual gifts and talents in order to advance the larger society and public good.

In a follow-up international symposium, Educational Futures – International Perspectives on Innovation from the Inside Out, an international partnership between Alberta and Finland was launched that will explore strategies for enhancing public education in what are currently two of the highest performing jurisdictions in the world.

A shared hope for Alberta

It is not about Alberta being the best place in the world; it is about being the best place for the world.

- Ken Low, Action Studies.com

Individuals, relationships and community

Who might Albertans become?

In the midst of Alberta's tremendous growth and resource bubble economy, what will the next twenty years hold for human relationships, identity and community? By 2050, our planet's population will increase by three billion, with three-quarters living in industrialized societies like our own. If the entire world lived as Albertans do today, we would need three planets – by 2050 we will need six. While one in five Canadians will have a psychological disorder in their lifetime, according to Mental Health Canada, Alberta has one of Canada's highest rates of adult depression at 5% of the population. In 2007, approximately 44,400 school-aged children in the province received doctor's care for mental health issues, with half the cases of depression beginning by 14 years of age.

At the fourth symposium, in April 2009, Andy Hargreaves and Dennis Shirley, co-authors of *The Fourth Way*, presented their views about a new way ahead for public education.

"Creativity, innovation, intellectual agility, teamwork, problem solving, flexibility and adaptability to change are essential to the new economy. But if these skills are all there is to 21st century schools, they will convert personalization into mere customization in a fast-forward world of temporary teamwork and swift solutions. Twenty-first century schools must also embrace deeper virtues and values such as loyalty, perseverance, courage, critical engagement, service, and sacrifice. Third Way learning is customized. Fourth Way learning is learning for life."



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Knowing and being ourselves – in an Alberta that is the best for the world

Jeremy Rifkin's compelling work, *The Empathic Civilization:* The Race to Global Consciousness in a World in Crisis, resonates many of the observations put forward by the Learning Our Way presenters since 2004. Looking globally, Rifkin concludes that once individuals reach a basic level of economic wellbeing, additional accumulations of material wealth do not increase their happiness but, rather, make them less happy, leading to more mental and physical disorders.



The result is a profound paradox as we struggle to feel intimately connected to those close to us while at the same time wanting to understand and feel a part of the wider community and world.

As Rifkin concludes, "The search for intimacy and universality at the same time continually forces the human mind to stretch itself in both directions. Although the two realms often appear at odds, the reality is that human beings are forever searching for 'universal intimacy' – a sense of total belonging."

This seemingly contrary push/pull between individuation and integration should, in Rifkin's hopeful view, be supported by the development of a "biosphere consciousness" characterized by a new era of governance and politics. In this emerging future, governing institutions will "more resemble the workings of the ecosystems they manage". This new biosphere model of community and governance is a profound expression that recognizes our interconnectedness and interdependence.

Work and the economy

The promises of volatility, uncertainty, complexity and ambiguity

The nature of work and the nature of our economies are changing as is the ideal that an individual's identity is wrapped around a life-long career. It is already the case that the top ten jobs in 2010 did not exist in 2004 and it is more than likely that the top ten jobs in 2025 do not exist now. The idea that we are preparing young people for a stable career is a thing of the past. Most young people will hold between 25 and 35 positions in their working life.

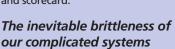
At three *Learning Our Way* gatherings held the spring of 2010, several hundred Albertans continued the conversations that explored the impacts of the globalization on the province.

Journalist and researcher Gwynne Dyer offered the meeting a mixture of trends that will affect Alberta, challenges within Alberta, and some things we might begin doing now. The most important trend affecting Alberta is climate change which he called the "elephant in the room". The energy game will be very different. There will be a global exit from carbon; this means getting out of fossil fuels. Another trend is the global economic scene where "the West won't dictate the terms anymore". Alberta needs to figure out how to be of use to a world that doesn't need manual labour, low level intellectual work, or factories. The good news: Alberta, unlike many other jurisdictions, has choices.

An alternative to our scarred prosperity

Economist Mark Anielski took the conversation in a different direction. He focused on moving away from economies of production and exploitation toward building an economy of well-being. Noting that our addiction to growth has not led to happiness, Anielski suggested that we get in

touch with our core values, return to some old virtues, and spend more time on contemplation and vision. Albertans need to figure out what our comparative advantage is, design for resilience, and build our economy with a new balance sheet and scorecard.



For Thomas Homer-Dixon who spoke at the inaugural *Learning Our Way* public lecture, the challenges we face as humanity call for the timely and successful applications of technology through ingenuity – when a unique confluence of people and experience comes together to resolve seemingly intractable problems. From climate change and terrorism to growing economic volatility, the 'ingenuity gap' raises the over-arching question that Albertans share with the globe: Are we smart enough to solve the problems we've created?

The continuing after-shocks of the 2008 melt-down of world financial systems point to the continuing challenges ahead for Albertans. The BP Deepwater Horizon oil spill in the Gulf of



Mexico and the tsunami that struck at the heart of Japan are two recent reminders of the brittleness of complex technologies and our vulnerabilities in complex eco-systems. The challenge for Alberta is: Are we ready to learn, lead and close the 'ingenuity gap'?

We have been doing something right, and it would be good to know what it is.

- Steven Pinker, Professor of Psychology, Harvard University

Governance, governments and politics

Increasingly, authoritativeness does not flow from authority

The Alberta landscape of governance, politics and citizenship is changing in many ways that are integrating and fragmenting our society at the same time.

All political institutions involved in designing and delivering public policy are having trouble adapting to the horizontal and networked reality of internet communications and community



engagement. Albertans are feeling frustrated with the old hierarchical top-down command and control models and are moving towards a new type of activism and engaged 'Netizen' using the social media model of information sharing.

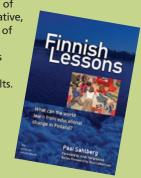
We need new forms of public engagement that constantly elevate the quality of the interactions with each other in our everyday lives and sustain relationships as we create new knowledge. We need to nurture a learning culture. As ATA President Carol Henderson cautioned at the 2011 Educational Futures symposium, "We can't rent a vision; we must create and give life to owning our own."

The internationalization of education to support transformation – moving beyond globalization

In this spirit, the ATA in collaboration with Alberta Education has begun a pioneering Alberta-Finland partnership to explore innovation in public education. Alberta and Finland are recognized for their world class schools. Both see and are undaunted by the difficulties of co-creating fundamentally different futures. And like good learners anywhere, they would like to put their minds together rather than go it alone.

Pasi Sahlberg, formerly with the World Bank and the European Training Foundation and now Director General of CIMO in Finland, points out the implications of these shifts in the nature of work for our thinking about learning, whether at school, college, university or life-long learning. To cope with the new economic order and the changing nature of work, individuals need to be flexible, creative, entrepreneurial and risk taking yet many of

educational institutions are locked into a teaching-learning model that encourages standardization, high outcome accountability and a search for fixed results. To build resilience, we need to transition from one model (the traditional learning model) to a new model (one that fosters individualized learning and flexibility) while keeping the best of the old.



Intended Changes

Compliance Narrow accountability

Our complex and brittle Standardizaton and systems fixed results

Creativity and entrepreunership Social responsibility Flexibility

What we have: A public management paradigm

What we need: A public assurance paradigm

Sustaining a culture of ingenuity and innovation in the next Alberta

What Albertans need to decide is what kind of province we wish to build for the future and work back from there to ask what should we do now to make our preferred future possible?

Emerging technologies

'Supersizing' the mind or deep learning: a transformed ecology for being human?

It is easier for us to imagine ourselves living among better appliances than among better human beings.

- Mihalyi Csikszentmihalyi

The grim irony of this observation captures much of conversation since 2004 regarding the impacts of emerging technologies and how these have threaded through many conflicting visions of the future. Tom Lombardo, of the Centre for Future Consciousness, represents an emerging group of inter-disciplinary writers who seek to gain an understanding of holistic, integrative, virtue and wisdom-based futures education. www.centerforfutureconsciousness.com

'Happiness' will not make us happy

Our shared challenge as Albertans is to welcome technology's expansion of our primary living space while seeking greater depths of learning and wisdom. Hopefully we will find ways to use technologies to restore our sense of connectedness and enchantment with the natural world. We rely on the earth, each other, and are connected in important ways to all other living systems.

Embracing the Anthropocene

The true meaning of the Anthropocene is that we have affected nearly every aspect of our environment – from a warming atmosphere to the bottom of an acidifying ocean. – New York Times, May 20, 2011

Six developments that will change our world over the next two decades

- The intelligent world wide web a smart internet that can anticipate your needs based on past patterns of interaction with others and your search for content. Imagine smart social networking where people that matter have an intelligent conversation with like-minded people with all the "clutter" of Twitter and Facebook sidelined while this occurs.
- The 'Prosthetic Impulse' the artificial eye, heart, pancreas are all in development or in the prototype stage and will shape our sense of human identity and collective psyche. It will soon be possible, using stem cells, to grow body parts. Oscar Pistorius, a double-amputee sprinter, who uses prosthetic carbon fiber legs and feet, plans to compete in 2012 Olympics although some say he should be disqualified... for having an unfair advantage.
- Robotics everywhere robots already play a significant role in manufacturing, health care and retail – you will start to see them in schools and learning organizations providing support to teachers, coaching students or undertaking science experiments.
- Environmental technologies as the world warms, we are becoming more determined to combat environmental degradation and climate change. There are new technologies being tested that will affect daily life (i.e., roof shingles that form solar panels, new methods to control water use, new transportation fuels, and solar powered aircraft).
- New learning technologies as hand-held devices become more ubiquitous and faster there will be new learning applications and the rapid development of mobile learning. Some 10% of "apps" developed for smartphones and hand-held devices are learning related. As we get better at 3D and animation, simulations will play a bigger role in learning and learners will be networked to others worldwide to support their learning.
- New health innovations that extend life we already live longer than our great grandparents and scientists are confident that we will continue to extend our lifespan, especially if we can combat diabetes and obesity.

Primary resource dependence Alberta's wealth continues to depend on prim

Alberta's wealth continues to depend on primary resources and commodities in spite of the growth in many new enterprises and the decades-old emphasis placed on economic diversification. What are the implications of this dependence for

the future of Alberta?

Individuals, relationships and community

Ready to learn?

 Alberta, along with the rest of Canada, is at the bottom of the 25 economically advanced countries with respect to children's readiness to learn by age 6.
 UNICEF 2009

A paradox of plenty

- Albertans are the oil-richest people on the planet with 51,900 barrels per person in proven reserves.
- By 2015, oil sands production alone will generate \$25,000 per capita in economic activity.
- Currently, one out of seven Alberta children live in poverty and 50% of women earn less than \$25,000 per annum.



Work and the economy

Energy superpower or marginal player?

Western Canada is the largest independent energy area in the free world.

Wal van Lierop, President and CEO of Vancouver-based Chrysalix Energy Venture Capital Investing in future technologies – are we putting our money where our mouth is?

Canada ranks at the bottom of global rankings on economic stimulus spending on clean energy technologies.

Steven Guilbeault, Co-founder of Equiterre

Governance, governments and politics

Rollercoaster economics

Volatile revenues from resources have contributed between 19% and 42% of Alberta provincial revenues since 2000 – this is not sustainable.

"Shaping Alberta's Future" 2011 report of Premier's Council for Economic Strategy

Growing, growing ... gone

 The fates of our cities are in our hands. By 2035, Alberta's population will grow to 4.6 million and booming cities will struggle to avoid social fragmentation.

Gree Oil



We are the stewards of a \$15 trillion resource (at today's reservoir size), one that benefits us all. Do we have the courage and the vision to use it for the benefit of the planet?

Satya Das, author, Green Oil www.greenoilbook.com

Emerging technologies

Geo-engineering

 Large scale environmental engineering projects are attempting to mitigate the effects of global warming.

Oil sands: Fact versus fiction

Although media reports on oil sands are wide ranging, the size of mineable land in the oil sands is 4,800 square kilometres, of that 1,352 square kilometres has been approved for surface mining as of January 2009.

The land size is comparable to Florida and any disturbed land must

be reclaimed under Alberta law.

Alberta Government, Alberta's oil sands:

http://oilsands.alberta.ca/documents/

The_resource.pdf

TREND Environmental crises

Public awareness and concern are growing as governments struggle to effectively respond to current environmental crises. Aside from the obvious implications of these critical environmental issues, in the context of our

wealth and obvious advantages, we are faced with the question, what should Albertans expect of themselves and what should the world expect from Alberta?

Who gets a voice in our communities?

An inconvenient truth – Alberta grizzlies extinct by 2050?

The Alberta government reports there are only 744 Alberta grizzly bears remaining, with 300 to 400 capable of breeding, and states the population would have to increase by about 300 to 400 to be "sustainable". Although Alberta's grizzly bears have now been labeled as "threatened" the government will not establish any new conservation funding.

Globe and Mail, June 3, 2010

Canadian governments at all levels disregard Aboriginal treaty rights, contaminate and deplete water, expropriate resources.

Schindler et al, www.scienceforpeace.ca/ the-alberta-tar-sands





Smart movers?

- The typical Alberta high school student spends 3.5 hours per week on the bus.
- The "build and close, build and close" negative feedback loop is unsustainable for schools as Edmonton's sprawl continues.
 - Michael Janz, Edmonton Public School Board
- Transit oriented development ideally the growth strategy for Calgary.
 - Beverly Sandalack, University of Calgary

We can decide what world we will live in

The Edmonton Composting Facility, the largest of its type in the world, is also the largest stainless steel building in North America. By 2013, the city anticipates that it will divert more than 90% of the city's household waste from landfills.

Constitutional rights for nature?

 Ecuador – the first country to recognize natural communities and ecosystems as possessing an inalienable and fundamental right to exist and flourish. Imagine Calgary was one of the largest communities visioning and consultation processes of its kind in the world. The project brought together citizens, corporations, community agencies and the local government – an ecosystem that engendered an atmosphere of innovation and collaboration.

Huffington Post, May 28, 2010



Is there peak oil, and so what?

The World Energy Council predicts: "a possible 'peaking' of conventional oil in the coming 10–20 years and of conventional natural gas before 2050." But by 2011, new technology meant new reserves of shale gas flooded the market and viability of renewable energy is in doubt without new ways to value the environment.

Greenwashing vs the politics of hope

 Short-term tweaking through biofuels and the Alberta government's \$2 billion carbon capture and sequestration program remain marginal in reducing ecological footprint.

REND

TREND The impact of globalization

Whether it is Brazil for lumber, Texas for oil or the University of Phoenix for students, the world increasingly operates as a deeply interconnected, economic, cultural and political entity. There is only one planet. How are we being impacted by

our growing global interdependence?

The Janus face of globalization



Vulnerable and brittle systems

The Eurozone tries to stay intact by back-stopping Greece then Italy then what?

- The Economist, June 25, 2011

Opportunity

China could become the world's largest economy by as early as 2012 overtaking the US for global dominance.

– www.economist.com/chinavusa

China and India – our new friends?

The rise in their middle classes to 50% of the total means a consumption boom the rest of the world will feed.

"Shaping Alberta's Future" 2011 report of Premier's Council for Economic Strategy

Working hard – growing disparity of income and opportunity

The income of the top 20% of wealthiest Albertans is 5600 times that of minimum-wage income earners.

Economic disparities in Alberta and Canada are growing, 10% of Canadian households hold 58% of the wealth.

Canadians spend 277 minutes per day working or studying – the fourth highest of OECD countries.

The corporatization and marketization of research

 Educators, along with universities, are caught up in the drive to "academic capitalism" that limits research in priority areas such as mental health, community development and the environment.



We must ensure that the global market is embedded in broadly shared values and practices that reflect global social needs, and that all the world's people share the benefits of globalization.

Kofi Annan, Secretary-General of the United Nations 1997 - 2006

Global drivers of health care spending

Health care services in areas with high levels of private involvement are the biggest cost drivers. Between 1975 and 2009, hospital spending fell by over a third as a portion of the provincial budget while pharmaceuticals costs more than doubled. Cutting hospital beds will not help control costs.

Diana Gibson, Parkland Institute

The next disruption

 Work is in progress to find new ways of powering vehicles and ending our reliance on oil. Just as downloading has disrupted the music industry, so too will the hydrogen economy disrupt the oil-gas economy.



Key drivers of work intensification are technologies like BlackBerries, which create the expectation that employees will be available 24/7. That

probably explains why 43% of women say their partners work too much. More than a third of men say the same.

– Linda Duxbury, Carleton University

The next war will be digitized

A British security expert has uncovered new evidence in the Stuxnet virus attack on Iran's nuclear programme.

The Telegraph, Jan. 21, 2011



Broadening learning opportunities

Expanded and instant access to "point and touch" digital technologies and the need to be connected to others in both the virtual and the physical worlds, are expanding the interest and

capacity to offer broadened learning opportunities. How will Albertans address issues such as core learnings, commodification of content and student assessment as these opportunities unfold?

Business, cities, learning partnerships

The City of Calgary currently has the highest postsecondary education rates per capita among the general adult population (73%); yet, only 63.5% of high school graduates go on to post-secondary education.



- The average debt for a student finishing an undergraduate degree in Alberta is about \$24,000.
 - Public Interest Alberta

When we all embrace learning in our daily lives, it will enhance our role in the community, our performance in the workplace, as well as our personal development and physical well-being.

Don Iveson, Edmonton City Councilor and Chair of Edmonton Learning City Initiative

15% of adult Albertans have difficulty reading even simple materials and another 25% cannot read well enough to reach their potential in today's knowledge-economy.

Literacy Alberta

The intensification of childhood

- One third of Alberta parents have hired a tutor for their child.
 Typically, the child is already an honours student.
- 88% of parents expect their children to attend post-secondary – 57% expect university attendance.

Barred options

- Public response to isolated incidents of violent crime committed by youth is not an effective basis for changing public policy.
 - Canadian Council of Child and Youth Advocates
- Canada incarcerates more convicted youth than almost any similarly industrialized country.
- Two out of three people in the youth justice system have two or more mental-health disorders.
 - Globe and Mail, July18, 2011
- California currently spends 45% more on prisons than on higher education.
 - afhimelfarb.wordpress.com

Facing the music

Researchers are embracing the overwhelming evidence that demonstrates the positive influence of music and the arts on learning.

James Caterall, Chair of the Faculty at the UCLA Graduate School of Education and Information Studies

Growing numbers of Albertans are rallying to have the fine arts a priority in education reforms resulting from the *Inspiring Education* policy review.

saveourfinearts.ca

- Currently, Alberta is at the back of the pack for Canadian provinces in terms of post-secondary education participation rates: 16.9% for Alberta compared to 22.7% for Canada.
 - Campus Alberta report, 2010.

Cyber Charter Schools

What are the implications for public education and society if learning is to be enacted any time, any place and at any pace in boundless environments?



The intelligent swarm

Collective intelligence in a wiki world?

National Geographic, July 2007

TREND 5

Rethinking citizenship and civil society

Governmental efforts to assess public mood using current public consultation models are being met with scepticism and mistrust. Opinion polls and focus groups are becoming less effective as

measures of public opinion on complex issues in a democratic society. How will the rise of social media and ubiquitous connectivity among opinion-leaders and 'influentials' shift policy deliberation and public accountability?

Climate change – leaders or followers?

- 77% of Canadian thought leaders rate Canada's efforts at addressing climate change as poor or very poor, while 75% say the same about Canada's performance at developing a greener economy. 68% rate Canada's efforts to expand renewable energy as poor or very poor.
- Thinking globally and acting locally to make sure that Alberta becomes the place the world needs to see – environmental stewardship, a strong democracy, vibrant industry, excellent education, resilient health and a strong innovation culture.
 - Participant, Learning Our Way to the Next Alberta



Privateering: privatization and profiteering meet

- George Lakoff
- The rise of P-3s: The Alberta government implements privatization through public/private partnerships for public infrastructure including school construction.

Shifting power relations

 Social media and peer-to-peer communications such as YouTube have become a platform for online engagement and political action.

Whose transparency? Whose accountability?

- WikiLeaks as simultaneous social good and social evil
 - Joshua Noble (Dalton Camp Award winner)

A revolution about a revolution

- The blocking of MSN and Internet sites in China and Iran have been unsuccessful – Twitter and other applications for connectivity triumph.
- Social media is personalizing engagement like television did in the days of the Vietnam War.
 - Ken Chapman, Cambridge Strategies

Shifting political (dis)engagements?

- First Nations seek nation-to-nation political relationships with governments.
- The proportion of the public with a "great deal of confidence" in public schools remains high, just below that of the Supreme Court and churches

A bear market?

The federal government lists the polar bear a species at risk after calculating that the tourism value of each bear (\$7 million) surpasses hunting, fur and meat consumption (\$1.4 million)

- CBC News, July 15, 2011

Alberta government plays down watersharing talks with Nestle about setting up a water exchange. Alberta's water is not for sale and will not be for sale.

Rob Renner, Alberta's Environment Minister The Canadian Press, May 12, 2011



The new agora – the media is a public space

 29 million votes for Canadian Idol contestants before the final in 2008 while 13.9 million of 23.6 million eligible Canadians voted in 2008 federal election.

Fluid personal identity Personal identity, once "set for a lit

Personal identity, once "set for a lifetime", is now more fluid and increasingly a matter for personal exploration, conviction and commitment. How will the expectation we each have to find our own identity and meaning impact relationships,

organizations, learning and institutions? How will we know that meaning has been found in our lives?

Rekindled narratives for Albertans and Alberta

 Finding – One in six marriages are based in internet matching.
 Those seeking partners are increasily having difficulty



finding partners that match their expectations.

- Separating Some 8,000 couples divorce in Alberta each year. Their marriage failed to meet the needs of one or both partners.
- Re-locating Alberta is a "go to" destination for new workers. Calgary will produce 220,000 jobs in the next ten years.

Shifting identities in the workplace

- The average worker entering the work force in 2010 will have up to 35 job changes in their working life.
- The average woman in the workforce is delaying having children until age 31.
- 17% of teachers leave teaching within three years and take up different professional work; one out of two will not be teaching in the same school in five years.
- 40% of Canadian women say they have put their careers on hold to raise their children, compared with 13% of men.

Alberta's democratic paradox?

Only 44.5% of Alberta's 2,252,104 eligible voters cast ballots in the 2008 provincial election down from 60% in 1993. Only 52% of Albertans voted in the last federal election, yet:

- 79% of Albertans wanted the right to be able to petition for and receive a referendum on an issue important to them, and
- 77% of Albertans wanted the right to recall their politicians. Alberta once had a citizens' initiative law.



If we don't teach children how to be alone, they will only know how to be lonely.

Sherry Turkle, MIT technology and society specialist

Blurring the line between connection and connectivity

- There are currently over 500 million registered Facebook users.
 75% of all social media traffic is driven by this one site.
- There are 50 million Tweets sent each day.

We want to be interrupted, because each interruption brings us a valuable piece of information... And so we ask the Internet to keep interrupting us, in ever more and different ways.

Nicholas Carr, The Shallows: What the Internet Is Doing to Our Brains



Technology's child: 40 is the new 30?

- Geena Davis gave birth for the first time at 46, Emma Thompson at 40 and Madonna at 41.
- In March 2010, the Quebec government makes medical history when it becomes the first North American jurisdiction to fund fertility treatments for women. Research shows that at the age of 42, there is only an 8% chance of having a baby without using donor eggs.

TREND

Blurring boundaries and emerging technologies

Albertans of all ages are tangling with the promises of technology that expand into new creative, social and work relationships while dissolving the boundaries between person and

machine, inner and public lives, information and entertainment, and domains of knowledge. Increasingly, technologies once adopted by a society are seen as much social as natural. What challenges and opportunities do emerging technologies and hyper-reality offer in our efforts to sustain vibrant democratic communities in Alberta?

- From the moment this generation met technology it was the competition. In many ways children see technology as a main competitor for their parents' attention.
 - Sherry Turkle, MIT professor

Recommendation

No screen time for children under two years of age and a maximum of 2 hours for children older than two years of age.

The Canadian Paediatric Society

Growing screen time

- Among Canadian youth in Grades 6-10, screen time on weekends was 7 hours and 25 minutes per day, while weekdays amounted to 5 hours and 56 minutes per day.
 - Active Healthy Kids Canada

While the Internet promises more connectivity, the number of meaningful personal connections an individual can have remains fixed at 125.

95% of blogs are abandoned after 120 days.

technocrats.com



 Smartphones add 10 days every year to workloads in the UK.
 Nectar Business Study

Remote access is all WET

A recent study of 33,000 workers illustrates work extension technologies (WET) have removed communication etiquette and increased work and stress levels.

- 70% report workloads increased.
- 76% experienced increased stress levels.
- More than 90% of managers indicated workload and stress had increased.
- Linda Duxbury, Carleton University

Our naked data and digital footprints

In Canada, the average digital footprint begins around six months of age with 9% of newborns being given an email address.

85% of Canadian mothers post photos of their children online before age two and 8% have created social networking profiles for these infants.

More than a third of Canadian mothers post their pre-natal sonograms online.

Vancouver Sun, Oct. 7, 2010

The digital divide persists

- The vast majority (94%) of people from households with incomes of \$85,000 or more used the Internet, compared with 56% among households with incomes of \$30,000 or less. The respective proportions in 2007 were 90% and 48%.
 - Statistics Canada

'New' is already old

Facebook lost users in 2010 in North America & EU. While email use dropped 60% for 12-17 year olds in favour of other social networking sites.

Time Magazine, Feb. 2011

On the horizon

- The distinction between us and robots is going to disappear.
 - Rodney Brooks
- The 'Internet of things' (i.e., live connection to the Web creates 'smart objects' such as vehicles with GPS locators).

 The Semantic Web: a world where online/offline boundaries are increasingly blurred (i.e., customized consumer product recommendations such as amazon.ca).