

## 21st Century Skills and Personalized Learning

What are they?  
Why do our students need them?  
Do they require a change in current practices?


Did you know?



Sometimes size  
*does* matter.

A stylized black and white line drawing of the Eiffel Tower, positioned to the right of the text. The tower is shown from a low angle, emphasizing its height. The background of the slide features a white upper half and a blue lower half with a black horizon line.

If you're **one in a**  
**million** in China . . .

A stylized illustration of the flag of the People's Republic of China, featuring a red field with five golden stars. The flag is positioned to the right of the text. The background of the slide features a white upper half and a blue lower half with a black horizon line.


there are **1,300** people  
just like you.



In India, there are **1,100**  
people just like you.



The 25% of the population in China with the **highest IQs** . . .



A stick figure wearing a blue graduation cap with a tassel and holding a yellow diploma. The figure is standing on a blue and black landscape.

is greater than the **total population** of North America.



A blue silhouette map of North America, including the United States, Canada, and Mexico.

In India, it's  
the **top 28%**.



**Translation:**  
They have more  
honors students  
than we have students.





Did you know?

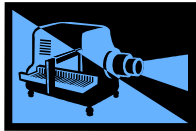
China will soon become  
the number one  
**English-speaking country**  
in the world.

If you took **every  
single job** in the U.S.  
today and shipped it  
to China . . .



it still would have  
a **labour surplus**.





During the course of this presentation . . .

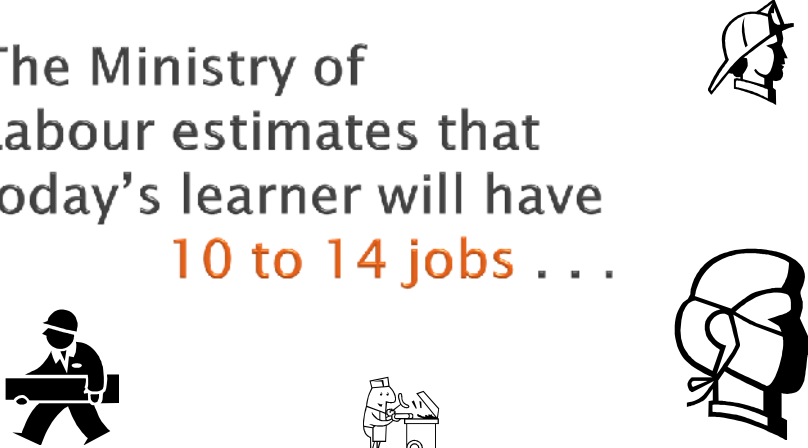
- 6 babies will be born in Canada.
- 67 babies will be born in the U.S.
- 274 babies will be born in China.
- 395 babies will be born in India.



The world?



The Ministry of  
Labour estimates that  
today's learner will have  
**10 to 14 jobs . . .**



The slide features three icons: a construction worker in a hard hat, a person sitting at a desk with a computer, and a person wearing safety glasses. The background is white with a blue and black wavy bottom edge.

**by age 38.**



The slide features an illustration of two business people in suits running through a set of interlocking gears. The background is white with a blue and black wavy bottom edge.

According to the Ministry of  
Labour . . .



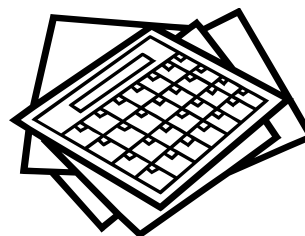
1 out of 4 workers today  
is working for a company  
for whom they have been  
employed **less than**  
**1 year.**

More than 1 out of 2  
are working for a  
company for whom  
they have worked  
**less than 5 years.**

According to university  
estimates . . .



the **top 10 jobs**  
that are most  
in demand  
in 2010



**didn't exist**  
in 2004.

We are currently  
preparing students  
for **jobs that**  
**don't yet exist . . .**



using technologies  
that haven't yet  
been invented . . .



in order to solve  
problems we don't  
even know are  
problems yet.



Name this  
country . . .



Richest in the world

**Center of world business and finance**

Currency the world standard of value

**World center of innovation**

Strongest education system

**Highest standard of living**

Largest military







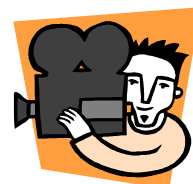
Did you know?

78% of **Canadian** homes now have broadband internet access. An increase of **450%** in the last **10 years.**

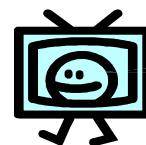




**YouTube**  
has only been in existence  
for 6 years, .....



but there are now  
140 million videos on-line  
and **100 million views a day.**





Did you know?

We are living in  
**exponential** times.



There are **currently**  
**31 billion**  
Google searches  
each month.



In **2006**,  
there were only  
**2.7 billion**  
Google searches  
each month.

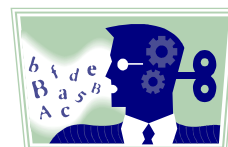
To whom were these  
questions addressed  
**B.G.** (before Google)?

The first **text** message  
was sent in  
December **1992**.





The number of **text messages** now sent and received every day exceeds the population of the planet.



There are about **540,000 words** in the English language . . .



about **5 times** as  
many as during  
Shakespeare's time.

A stylized, cartoonish illustration of William Shakespeare's head and shoulders. He is depicted with a balding head, a mustache, and a goatee, wearing a blue ruffled collar and a dark jacket. The illustration is positioned to the right of the text.A decorative graphic at the bottom of the slide, consisting of a blue textured area on the left, a black horizontal band in the middle, and a light blue gradient on the right.

More than  
**3,000 new books**  
are published daily.

A simple line-art illustration of a stack of three books, shown from a slightly elevated perspective. The books are stacked on top of each other, with the top book's cover and pages visible.A decorative graphic at the bottom of the slide, consisting of a blue textured area on the left, a black horizontal band in the middle, and a light blue gradient on the right.

It is estimated that  
a week's worth of

*New York Times* . . . .



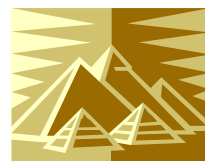
contains more information  
than a person was likely  
to come across  
in a **lifetime**  
in the 18th century.



It is estimated that  
**4.0 exabytes** ( $4.0 \times 10^{18}$ )  
of unique new information  
will be generated  
worldwide this year.



That's estimated to be  
more than in the  
previous **5,000 years**.



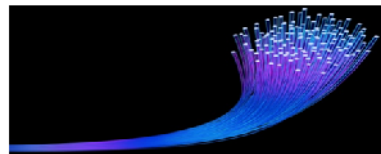


The amount of new  
technical information is now  
**doubling in less than  
2 years.**

For students starting a  
four-year technical or  
**college degree**, this  
means that . . .

half of what they learn  
in their first year of study  
will be **outdated** by their  
third year of study.

Third-generation **fiber optics**  
recently been produced by  
NTT Japan.....



pushes **14 trillion**  
bits per second down  
one strand of fiber.



That's **2660 CDs** or  
**210 million simultaneous**  
**phone calls** every second.



It took **radio 38 years**  
to reach an audience of  
50 million people.



It took **TV 13 years**  
and the **internet 4 years**  
to reach an audience of  
50 million people.

It took **iPod 3 years**  
and **Facebook only 2 years**  
to reach an audience of  
50 million people.

In **1984** there were only  
**1000** internet devices  
in existence.



By **1992** there were **1,000,000** internet devices in existence, but in **2008** there were more than **1,000,000,000** .



The **\$100 laptop project** is expecting to ship between **50 to 100 million laptops** a year to children in underdeveloped countries.

Predictions are that  
by 2013 a **supercomputer**  
will be built that exceeds  
the computation  
capability of the  
human **brain**.



By 2022, when current  
**1st-graders** will be  
18 years old and  
contemplating their  
(first) careers . . .




it may only take a  
**\$1,000 computer** to  
exceed the capabilities  
of the human brain.



What does it  
all mean  
**for our  
students?**



What are the  
10 most significant changes   
since **your** high school graduation?

In our world?

1. ?
2. ?
3. ?
4. ?
5. ?
6. ?
7. ?
8. ?
9. ?
10. ?

In our schools?

1. ?
2. ?
3. ?
4. ?
5. ?
6. ?
7. ?
8. ?
9. ?
10. ?

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The need for more than knowledge.  
Just knowing the facts won't cut it!

- ▶ “Within the context of core knowledge instruction, **students must also learn the essential skills for success in today's world**, such as critical thinking, problem solving, communication and collaboration.”

*Tony Wagner*

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## **Core Subjects** but with 21<sup>st</sup> Century Themes

### **Core Subjects**

- ▶ English – reading and language arts
- ▶ World languages
- ▶ Fine Arts
- ▶ Mathematics and Economics
- ▶ Sciences
- ▶ Geography and History
- ▶ Government and Civics

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## Core Subjects but organized around **21<sup>st</sup> Century Themes**

- ▶ Global awareness
- ▶ Business and Entrepreneurial Literacy
- ▶ Civic Literacy
- ▶ Health Literacy
- ▶ Environmental Literacy

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## Beyond subject knowledge – The 7 new skills for survival

1. Critical thinking and problem solving
2. Collaboration and leading by influence in a multi-cultural environment
3. Agility, adaptability and self-direction
4. Initiative and entrepreneurialism
5. Effective oral, written, technological and multi-media communication
6. Accessing and analyzing information
7. Curiosity and imagination

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**What are we going to ask on our tests, when our students  
are walking in with Google in their pocket?  
Are they going to ask better questions  
than we ask today?**

*David Warlick*

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## More than just teaching facts – How do we build these key skills in all of our students?

### Personalized Approach to Learning

- ▶ Focus on 21<sup>st</sup> century skills
- ▶ Build interdisciplinary understanding
- ▶ Emphasize understanding and application over memorization of facts
- ▶ Engage each student with real world situations
- ▶ Allow for multiple measures of subject, skill and concept mastery
- ▶ Facilitate opportunities for project based learning

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## The intended outcome

A change in  
*what* our students learn  
and  
*how* they learn it.

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## More than just teaching facts –

- ▶ In your group, discuss:
  - Why changes to the current structure of education in B.C. are necessary?
  - What should these changes be?
  - How can we most effectively implement the necessary changes?



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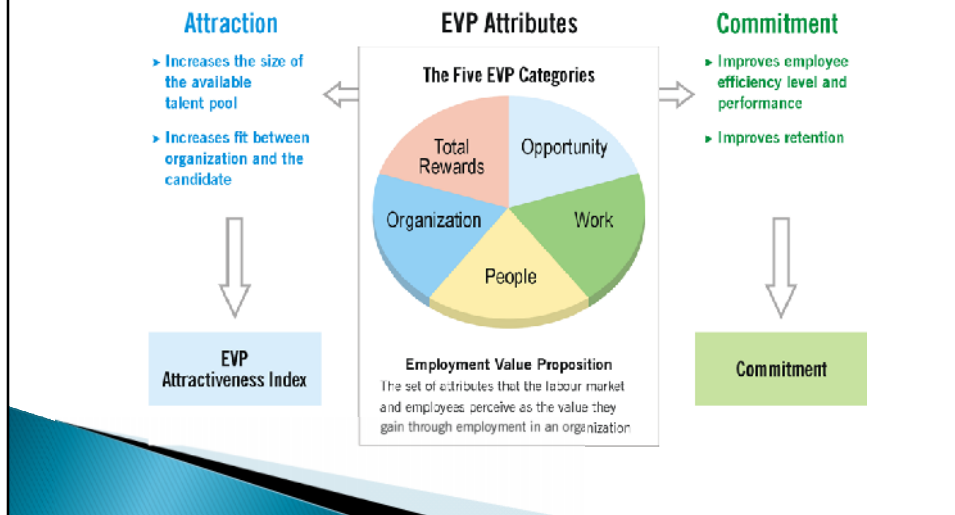
## Tomorrow's Workforce – What do we need and what do they want?

- ▶ What new or improved skills are we looking for from our teachers?
- ▶ What motivates the 'Net' generation?

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## EVP in Detail

### The Employment Value Proposition



## Engagement Defined (Scarlett Surveys)

- A measurable degree of an employee's positive or negative emotional attachment to their job, colleagues, and organization which profoundly influences their willingness to learn and perform at work

## The 10 C's of Engagement

- ▶ Connect
- ▶ Career
- ▶ Clarity
- ▶ Convey
- ▶ Congratulate
- ▶ Contribute
- ▶ Control
- ▶ Collaborate
- ▶ Credibility
- ▶ Confidence

(Ambler, The Practice of Leadership)

## Research Says...

- ▶ **C**onnect, **C**onvey and **C**ontribute are most significant “**C**'s” of engagement
- ▶ Effective communication with employees is the biggest factor overall
- ▶ Leadership style and support is crucial
- ▶ Compensation is not a key factor

## What motivates the 'NET' generation?

- ▶ Accustomed to instant gratification and 'always on' connection
- ▶ Use the web for 1) friendships, 2) interest driven self-directed learning, 3) as a tool for self expression.
- ▶ Constantly connected and multitasking in a multimedia world
- ▶ Less fear and respect for authority
- ▶ Want to make a difference and be worthy

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## Human Resource solutions

- ▶ What are the current or proposed Human Resource solutions to these changing needs?
  - EVP framework
  - Make A Future
  - Intersecting needs

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## New problems require new solutions

- ▶ In your group, discuss:
  - What is your school district doing to meet these new Human Resource challenges?
  - What else needs to change?
  - What concerns do you think will arise as changes are implemented?



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## What are the implications of current Labour Relations realities and perspectives for 21<sup>st</sup> Century Learning?

- ▶ What are the current realities in our world of Labour Relations?
- ▶ What are the differing perspectives and how do they intersect?

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## Current Labour Relations realities?

- ▶ What do you think are the implications and opportunities that arise out of upcoming teacher bargaining when considering implementation of 21<sup>st</sup> Century Learning in the current labour relations context?

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## What we have heard from the field so far?

- ▶ Initial survey of Trustees and staff.
- ▶ Regional meetings
- ▶ Symposium November 2010

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## Next steps in the consultation and feedback process

- ▶ Second survey of constituents
- ▶ Representative Council meeting
- ▶ BCPSEA AGM

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## What should our priorities be?

- ▶ In your group, discuss what our priorities should be toward:
  - Implementing needed educational reform?
  - Updating programs and structures?
  - Revising Human Resources policy and practices?
  - Bargaining?



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## For further information contact BCPSEA

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