"No-one changes unless they, themselves, see a need for change. Unless people understand how future trends impact their organizations and communities, they will maintain their traditional behaviours, attitudes, and action. The objective is to help others become familiar with the need to develop a futures context within which to think about issues." (Levine and Smyre 2012)

As you reflect on your work this year in your schools and districts, I would like you to think about your professional learning culture and the importance of fostering innovation. I realize that innovation has become a buzzword – and can mean different things to different people. However, the key characteristics of innovation include partnerships and collaboration at all levels, user-centeredness, exploiting technology’s potential, networking opportunities, and the empowerment of communities.

Innovation is the act of introducing something new and to be effective, it has to be simple and focused. It is not just generating ideas but executing them to create value. School and system leaders model innovative practices in their approach to leadership. The new practices are identified through an established cycle of reflections and evaluations. It’s not about jumping on a bandwagon with the latest practice, but rather a thoughtful response to the rapid changes in our society. Innovation emerges over time meaning we have enough time to not just manage problems but time to solve them.

How does your school or district encourage innovation? Is it seen as important collectively? Do you as a leader and your leaders actively encourage creative thought and practices? Are teachers exposed to changes in practices that could enhance or address barriers to achieving student outcomes? Does the professional learning address future as well as current challenges?

Professional learning should involve new and emerging practices and the sharing of ideas with other communities. Our Learning Forward Ontario team will continue to encourage innovation in practice and offer events and resources that help you better understand national and international education trends. We are always open to ideas and suggestions. Please send us emails with your thoughts as we head into next year’s planning.

Have a safe and relaxing summer and we look forward to seeing you at our various events in the upcoming school year.
Creativity is a quality valued not only by educators but also by Global 1500 Chief Executive Officers, a group that ranked creativity as the #1 skill they prized for 21st Century leaders (MacDonald, 2010). Entire issues of major educational and research journals have been devoted to the subject (Kaufman, 2010). Unfortunately the degree to which leaders in education and business say they value creativity isn’t matched with how most organizations are actually run. This article advances five arguments. First, creativity remains an essential skill for students, teachers, and educational leaders. Second, in the past two decades, creativity has been declining for both individuals and organizations. Third, many of the ways in which creativity is taught and assessed are deeply flawed. Fourth, effective creativity depends upon experimentation, failure, and feedback. Fifth, there are practical and immediate steps that teachers and educational leaders can take to nurture and encourage creativity.

CREATIVITY IS ESSENTIAL

Creativity is not merely a response to prevailing problems and consumer demand. As Henry Ford famously said, “If we asked people what they wanted, they would say ‘a faster horse.’” Similarly, few people in the 1960’s would have predicted that the ultimate arc of the nuclear weapons race between the Soviet Union and the United States would be a world with only a fraction of the number of weapons in 2014 as half a century earlier. Therefore, although it is a fool’s errand to predict the next turn in the creative endeavors of humanity, it is not in the least speculative to assert the importance of creativity. Yesterday’s solutions will not address tomorrow’s challenges. Faster machines and longer living humans, as exciting as those prospects may be, are unlikely to address the great issues of our time – climate change, poverty, and terrorism, to name a few. These require not merely technological adaptation, but new ways of thinking. The nations with the highest standardized test scores may participate in these solutions, but societies that have systematically undermined creativity in pursuit of higher scores are unlikely to create the breakthroughs necessary for the sustainability of the planet. We should look to the engineers, teachers, artists, political leaders, and scientists who thrive on divergent thinking rather than conformity to create the innovations that will be for the 21st Century what the green revolution and technology boom were for the 20th Century.

by Douglas Reeves and Brooks Reeves

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CREATIVITY IS DECLINING

The leading scholar of creative decline is Professor Kyung Hee Kim of the College of William & Mary. After an analysis of more than 300,000 adults and children over twenty years, Professor Kim concluded that not only is creativity declining as a general characteristic of students, but also that the greatest decline is in “creative elaboration” – the ability to develop and elaborate upon ideas, along with the detailed and reflective thinking required for creativity (Kim 2011). Many business leaders, who often are happy to share their advice that education should emulate their leadership principles, turn out to be distinctly unhelpful on the subject of creative leadership. According to a global study of innovation (Jaruzelski, 2013), fewer than half of companies surveyed said their corporate culture robustly supports their innovation strategy, even though culture was the strongest single variable tied to innovation performance. To cite a practical example: creativity requires risk, and risk entails error. But the vast majority of companies are driven by quarterly results – success over 90 days – just as school systems are driven by short-term test scores and a few teacher observations during the year. In such a high-stakes environment with a focus on weeks or months of performance, no one except the independently wealthy and foolhardy will engage in creative enterprises that might fail.

TEACHING AND ASSESSMENT OF CREATIVITY IS FLAWED

We wish that we could leave our concerns about creativity by complaining only about business leaders and policymakers, but as educators we have plenty of problems to fix in our own back yard. Too many teachers, for example, continue to embrace the long-discredited practice of brainstorming – the unfiltered acceptance of ideas generated by a group. In fact, this 1940’s era “professional practice” developed by a New York advertising executive is inferior to the work by individuals to develop ideas within clear constraints (Stroebe, 1987). The first critique of brainstorming was published in 1960, yet more than half a century later creativity rubrics published by teachers with the best of intentions praise students for engaging in this unproductive practice (Nemeth, 2004).

Indeed, as widely studied as the phenomenon has been, the glut of misinformation surrounding creativity is at times astounding: Creativity an inalienable trait; creative geniuses are born; the artistic temperament is a fluke of nature. But there is much evidence to suggest that creativity can be fostered, and perhaps more alarmingly, it can be inhibited.

While educational leaders claim to value creativity, teachers and students quickly understand that what is most valued is what is assessed – and that is the single right answer to a question. Even self-described “performance assessments” quickly yield formulaic results, with quantity of words elevated over the quality of reasoning.

Even self-described “performance assessments” quickly yield formulaic results, with quantity of words elevated over the quality of reasoning.
CREATIVITY REQUIRES EXPERIMENTATION, FEEDBACK, AND FAILURE

While experimentation seems only useful for the chemistry lab, using principles of the scientific method can provide a good framework for understanding creativity as a whole. As Nelson Goodman points out in *Languages of Art*, both science and the arts rely on experimental methods (Goodman, 1968). Both science and art strive to create mental models of the world, a world further explored by asking the question, “What if?”

True inspiration rarely arrives fully formed in bath-time “Eureka!” moments. Steven Johnson coined the term, “the slow hunch” (2010) demonstrating how creative inspiration is often the result of a long simmering exploration of interconnected ideas, ideas that must be tried and observed before judgment can be passed. If we wish our children to develop creative skills, then we need to nurture and encourage a pattern of hypothesis, attempt, and failure. As Samuel Smiles (1859) once said, “We often discover what will do, by finding out what will not do; and probably he who never made a mistake - never made a discovery.”

Anyone working on any creative endeavor needs the assistance of feedback they can reliably depend upon, and this is doubly true when working with students who are hopefully developing the creative habit. But if student assessment relies on a rubric that is too binary or not descriptive enough, the student is left to their own devices on how to improve their own performances. The same applies equally to teacher evaluations. The keys to effective feedback is that it is clear, objective, impersonal, and constructive. Evaluations are too often paired with both carrot and stick, corrupting what could be a learning opportunity into a situation fraught with consequence. The expectation of failure, and the expectation of learning from failure is essential for any creative organization.

WAYS TO ENCOURAGE CREATIVITY

Here are five ways that teachers and educational leaders can encourage and nurture creativity.

1. First, create a culture of multiple attempts before a final product is accepted. Too often the default practice is to have students evaluated only after completion of a finished piece of work. The expectation is that students should already have the knowledge of whether or not their work is good, and assessment consists of whether or not they have met certain concrete requirements. School papers and projects often consist of students jumping through a series of preordained steps, challenging neither educator nor pupil to go above and beyond the expected. This practice does a disservice to children who need additional guidance as well as students who are never pushed to go beyond their abilities. By creating an expectation of reworking a project, feedback becomes more useful as a learning tool as students can immediately apply it to improve their product.

   The same can be applied on an organizational level. When every teacher observation and student exam carries potentially dire consequences, then we should not be surprised that teachers and students retreat to safe and distinctly uncreative presentations. Rather than risk a new teaching strategy, teachers will rely on lesson plans that have “worked” for decades and for which administrative approval is a pre-ordained conclusion. Students will lapse into the formulaic five-paragraph essay rather than literacy response that might challenge the reader – and might also be a colossal failure.

2. Second, schools should require constructive contention among students and colleagues. Administrators in particular should beware of the appearance of buy-in from faculty, particularly over a new instructional initiative. “Universal buy-in” is merely a code for the following: the last time we raised objections, we were categorized as “not a team player;” better to allow the boss the illusion of buy-in than engage in the discomfort of critical thinking. Wise leaders and teachers will set the stage for constructive contention by doing what debate coaches do every day – require people to take positions that are contrary to their personal feelings. In these cases, arguments and evidence against a proposed position cannot be regarded as disrespect or personal animosity, but rather an integral part of the process of testing ideas in the intellectual arena.
Third, encourage collaboration. Creativity is an interaction between individuals and ideas. A prevailing misconception regarding innovation is that the creative spark is the result of a lone individual, when in reality the greatest innovations and leaps of insight are born through exploration and borrowing from other people’s ideas. As brilliant as Einstein was, his fantastic insights which led to the General Theory of Relativity would have been impossible without the experimental data discovered by physicists Albert Michelson and Edward Morley (Stannard, 2008).

Instead of being encouraged to share and use ideas, educators punish students for working collaboratively or using sources outside of selected texts. When students are expected to be brilliant or creative in a completely isolated environment, not only do we create false assumptions about how creativity is supposed to work, we actively sabotage the student from engaging in real collaborative work in the future.

Fourth, ban the use of the average for the assessment of students and teachers. The growing use of computerized observation systems for students and teachers means that every observation and every assessment – even those regarded as “formative” and “low stakes” – are indelibly entered into the granite of the 21st Century – electronic archives. The default of the vast majority of computerized observation and assessment systems is the use of the average to determine the final score, meaning that the mistakes at the beginning of the term diminish the successes at the end of the term.

Fifth, celebrate the right kind of failure. As described by Greek poets Prodicus and Xenophon (Spence, 1753), when the youth Heracles stood at the age independence, he faced a choice between two paths. He could either descend to the Veil of Indolence or ascend to the pursuit of knowledge, depicted in classical gardens as the scholar’s bench. Indolence is easy, and the failures associated with it add nothing to our professional knowledge. The path of scholarship – the path of inquiry, testing, disappointment, and persistence – is difficult and also fraught with failure. But while failure – a low score on a test, a disappointing response from a class, a bored yawn from an audience – may be universally disappointing, there is an enormous difference between the failure born of indolence and that resulting from the scholar’s reach. Try to recall the last time in a professional development presentation that you heard the words, “I thought I would find these results... but I was wrong.” While that is hardly the stuff of motivational speakmaking, it is the essence of learning. Just as we must reject unfiltered brainstorming (and learning styles and a host of other mythologies that continue to prevail across the educational landscape), we must celebrate the students, teachers, and administrators brave enough to say, “I was wrong.”

Celebrate the right kind of failure.

The path of scholarship – the path of inquiry, testing, disappointment, and persistence – is difficult and also fraught with failure.

There is an enormous difference between the failure born of indolence and that resulting from the scholar’s reach.

We must celebrate the students, teachers, and administrators brave enough to say, “I was wrong.”
Richard Elmore’s (2011) classic book I Used to Think... But Now I Think... provides a model of how we can celebrate the creative process. Henry Ford’s first two companies went bankrupt before he perfected the assembly line which changed the industrial world. Gloria Steinem experienced many rejections before launching Ms. Magazine and leading the women’s movement. Nikola Tesla worked in isolation and obscurity perfecting electrical technology which would change the 20th century. Langston Hughes quit his job as a highly paid secretary to become a busboy so he would have the time to write poetry, his voice giving rise to the Harlem Renaissance and country wide call for social justice. Only when we are ready to recognize these levels of persistence, and value the level of failure that accompanies them, can we claim to value creativity.

Creativity isn’t dead, but it is certainly wounded. Educators and professional developers must not wait for the actions of policymakers to catch up to their rhetoric. Rather, we must take every opportunity – in classrooms, faculty meetings, professional development seminars, and board rooms – to restore creativity to its rightful place as a priority in 21st Century learning.

REFERENCES

Save the date!

February 19th, 2015

George Couros – Digital Leadership
George is a well-known and very popular speaker on digital technology, social media, and 21st century learning. Check out his blog at: http://georgecouros.ca/blog/
Learning Forward Ontario is hosting a one-day session with George on February 19th 2015.
Save the date!
The theme of ‘Moving Forward – Great to Excellent’ was clearly evident at the spring Learning Forward Ontario conference in Niagara Falls on May 1st and 2nd. Over 120 educators from across Ontario joined together for learning directly related to the work they are doing in their school districts. The focus on adult learning brought together superintendents, school administrators, provincial leads, consultants, and classroom teachers for a common purpose: improving learning outcomes for all students.

The conference included a few firsts for Learning Forward Ontario. It was our first conference in Niagara Falls, our first use of twitter (#LFO2014), and it was the first keynote address in Ontario for Dr. Judith Warren Little. Dr. Little is known for her work in support of creating conditions for teacher leadership and learning in schools. This focus was timely for the Learning Forward Ontario audience who pursue this goal in their own work.

During her keynote address, Dr. Little took the audience through the evolution of teacher leadership in schools. She then talked about a study of two school districts that approached professional learning at the school level very differently (one that had district level instructional coaches working in schools and one that did not). The study found that the impact on student learning was much greater in the district that had coaches. She indicated that it was not enough to just have coaches, but it was critical to have well trained coaches. She also focused on the importance of the culture and structures created in schools with coaches as a critical component of the success of the work. The successful schools had cultures where teachers initiated conversations about instruction with their peers at every opportunity. From this study, Dr. Little noted that the alignment of system level leadership, expectations, and support was critical to the success of a coach infused model for school improvement.

In contrast to the effective coaching model described above is one left solely to the principal to lead. Dr. Little was less hopeful of this approach as she noted, “If the learning focus for adults in schools is left solely to the discretion of school leaders, then the impact is much less.” She went on to emphasize that school leader impact is greatest in the creation and support of structures in a school that allow teachers to learn from other teachers with support from well-trained instructional coaches. Dr. Little described a strong professional learning community as one having four key elements:

- Opportunities for deep discussions about teaching and learning.
- Established routines for teachers and available resources.
- Clear leadership within the group.
- Professional ties beyond the school itself.

Dr. Little also talked about the importance of creating conditions in schools and classrooms that allow curiosity to take over. In the classrooms she suggested that a start is for teachers to begin by asking students “how did you get started in your thinking, instead of asking about the answer first.” Her point was that the best results occur when teachers focus on student thinking. In closing, Dr. Little encouraged us to “slow down and focus on where you really want people to focus.”

Day two of the conference started with our president, Amy Lin and OMCA president, Cam McDonald moderating a panel discussion with mathematics leaders from across Canada. The panel consisted of David Martin (Alberta), Annie Savard (McGill University, Quebec), Dr. Marian Small (Ontario), and Jan Crofoot (Principal, Peel DSB). This question and answer session left participants with a clear national perspective on the current thinking on mathematics learning and teaching in Canada. Here are a few thoughts and comments that came out of the discussion:

- Teacher training in teaching mathematics is important, but even more important is the culture in the school around professional learning.
- Teachers need to have a clear understanding of not only what, but why they are teaching what they are teaching.
- Inquiry has to be more than just the thing that you want to do. We have to move beyond surface learning.
- Understanding needs to be the focus – not speed.
- In math, value divergence – not convergence.
- Value thinking – have the students ‘think’ each day?

Student learning in mathematics continues to be a significant concern across Canada. This panel confirmed that teachers and districts have the ability to improve math learning outcomes for students. We need to take the time to intentionally take the time to apply what we know in order to see the results students deserve.

Beyond the keynote and mathematics panel, participants learned more about collaborative inquiry, protocols for professional learning, flipped classrooms, focus intervention strategies, supporting students in applied level classrooms, and equally important, had many opportunities for networking with instructional leaders from across Ontario.

A special thank you to those who presented. Learning Forward Ontario continues to grow and it’s because there is a need for networking for those who lead professional learning. Also, thanks to all those who attended. Learning Forward Ontario strives to support its members. Finally, thank you to our exhibitors. We really appreciate your support.
Collaborative inquiry teams are asking, “When is it time to ask a new question?” “How do we know when it’s time to move on to a new strategy?”

The process begins by teams identifying a student learning need along with the evidence to support that identification. What knowledge and skills do our students need in order to succeed? What evidence do we have that tells us that this is the student learning need?

From there, the team identifies teachers’ learning needs. What classroom practices (that are different from what we’re currently doing) could we learn more about to address the gaps in student learning that we’ve identified? As the team develops common understandings of the new practices it’s likely that they will begin to refine their inquiry questions because they often come to realize that the terminology they’ve used is too broad and/or ambiguous. Next, while considering the degree to which new practices have been put in place, the team collects additional student learning data in order to assess the impact of their actions.

Collective and frequent examination of student learning evidence provides teams the opportunity to adjust and fine tune their practice accordingly. Upon examining this evidence, teams might find the following framework helpful.

**RESULTS FROM COLLABORATIVE INQUIRY**

<table>
<thead>
<tr>
<th>IMPROVEMENT IN STUDENT OUTCOME</th>
<th>NO IMPROVEMENT IN STUDENT OUTCOME</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PATH 1</strong></td>
<td><strong>PATH 2</strong></td>
</tr>
<tr>
<td><em>No understanding of how or why the results were achieved</em></td>
<td><em>A clear understanding of how or why the results were achieved</em></td>
</tr>
<tr>
<td>1. Was it luck or did the change in practice make a difference?</td>
<td>1. Did outcomes improve for all students or just some?</td>
</tr>
<tr>
<td>2. How can you find out?</td>
<td>2. How can you find out?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>PATH 3</strong></th>
<th><strong>PATH 4</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>No understanding of how or why the results were achieved</em></td>
<td><em>A clear understanding of how or why the results were achieved</em></td>
</tr>
<tr>
<td>1. What got in the way?</td>
<td>1. What did your team learn?</td>
</tr>
<tr>
<td>(remember to separate person from practice)</td>
<td>2. Based on your findings, what is important for others to know?</td>
</tr>
</tbody>
</table>

Which path would your team follow? What does the student evidence show?

Teams that adopt a ‘wait and see’ outlook (“We’re waiting for the year end report card grades” or “We’re waiting to see how this plays out on EQAO”) are missing out of opportunities to respond immediately to their students’ learning needs.

Keep in mind, the process is iterative so teams are likely cycling between stages throughout the duration of their inquiry.

When is it time to begin the cycle again? Has your team answered its question? Was it a worthy question to begin with?

Note: This framework is based on Reeve’s (2010) Leadership and Learning Matrix.

**REFERENCE**