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Untapped Talent: Can better testing and data accelerate creativity in learning and societies?

Monday, December 14, 2015

Innovations from the regions

With Fellows attending from across the globe, examining how different countries are tackling the related issues of assessments, data gathering and nurturing creativity was a natural start to the first full day of the *Untapped Talent* session.

Latin America

Fellows started in Latin America, a region that has enjoyed significant economic growth in the past 25 years, coupled with rising education spending and standards. Significant improvements are being made, but this is happening at different rates in different countries. Some countries have well-established public school systems with regular testing and comparable results. Some are only just starting to do this and remain to be convinced of the benefits of regular assessments and data collection.

However, even in countries that do conduct regular testing and data collection, such as Chile and Mexico, their best students' results lag behind even the poorest students in China, according to PISA data. The lowest performing schools are making the greatest improvements, but the highest performing schools are stagnant, leaving the region's school leavers and graduates unprepared to enter the global economy.

Encouraging regular and comparable assessment, and the collection of basic data such as numbers of schools, teachers and pupils, are just two approaches the Inter-American Development Bank has taken to try to improve the region's education outcomes. If policymakers don't even know how many students they have living in a given area, how can they distribute adequate resources? If schools test one age group one year but a different group the next, how can they make comparisons and track progress year-on-year? More countries are starting to adopt these practices.



Zemira Mevarech, Abby Loebenberg and David Miller

Another key area in need of reform in the region is teaching. Low admittance standards to training courses, and low esteem of the profession, often make it hard to attract the best students to teaching. The region is facing a stark contradiction: everyone wants to improve education but no one wants to be teachers. Raising pay is not enough. Conditions, mindsets and attitudes towards the profession must also be improved. Generating evidence of good teaching practice and learning outcomes is needed to support such changes.

North America and Europe

In North America, while teaching is held in higher regard, issues still remain, such as "math anxiety." Of all US college students, those studying to be elementary school teachers profess to have the highest level of "math anxiety," questioning their math skills or simply declaring that they "are not a maths person." If teachers lack confidence in their math skills, they run the risk of passing on this math anxiety to their students, especially when this is compounded by parents' math anxiety.

Two solutions to tackle math anxiety (and untap students' unexplored talents) were proposed by panelists speaking on North America and Europe: one – enable more STEM-learning at college level, and two – introduce more meta-cognitive and

meta-creative thinking into the learning process at all levels of education.

The US education system, especially at high school and college level, is already broader and less specialized than the curriculum on offer in much of Europe, where students are often made to specialize in a field or specific subjects from the age of 14. Many US colleges require the students of all majors complete math and science courses. The earlier these course requirements are taken, the greater the opportunity the student has to discover their talent in this field and switch majors. Much of the debate surrounding STEM study focuses on the take up of the field, but those leaving the field shouldn't be seen as a failure – they can bring valuable knowledge and skills to other fields, such as education, policy and law.

Instilling meta-cognitive and meta-creative skills in all students can help with their problem reasoning and enhance their critical thinking and creativity, encouraging such questions as: what is the problem about? How is the problem similar to other problems I've already solved? What strategies might work to solve the problem? Does this solution make sense? Could it have been done another way? Am I stuck? Why? It is such new pedagogy that will accelerate creativity and learning, not testing, argued one Fellow. [continues p2]

Unlike its neighboring region, the US already collects a lot of assessment data from its students, but the use of this can be controversial. Some colleges use the “blunt instrument” of SAT scores and GPAs to calculate students’ eligibility for funding, for example. However this data often does not highlight the more “creatively disruptive” students, whereas their essays, teachers’ recommendation letters and in-person interviews will likely offer greater insight. If we persist on using quantifiable data, how can we assess and quantify creativity?

Africa and Asia

This is a question also asked in Africa, where much of the education system was inherited from former colonial masters, and there is little focus on creativity. Although *access* to education across the continent has improved, the *quality* of the education offered is poor in many countries. Approximately 250 million children worldwide cannot read, write or count even after four years of primary education – the majority of these children are in Sub Saharan Africa. Creative or critical thinking is not encouraged, with “teaching to the test” prevalent. Children are taught only to reproduce what they are to be tested on – but this could provide a window of opportunity: if children were to be tested on creativity, they would be encouraged to be more creative. However, much like other regions, there is still little understanding at this stage of exactly how to assess such creativity.

Assessment is considered important because without testing, it is not known how well the system is functioning, schools and governments cannot be held to account, people are not empowered, and ultimately education will not be improved, one Fellow said.

In India, tests and exams are also widely and regularly taken – but they are also widely and regularly cheated on. Cheating has become so widespread that it has become a “community affair”. Students cheat so they don’t have to study; parents encourage them so their children can work, teachers encourage them to meet standards and receive pay and bonuses; and politicians turn a blind eye or accept bribes to cultivate votes. Cheating is so prevalent, lamented one Fellow, that “the next generation of teachers won’t even be qualified enough to help the next generation of students cheat!”

One effort to move away from cheating and build greater trust in assessment results has been to trial a system of “non-competitive one-to-one interactive evaluation process.” Students meet with their professor for a one-on-one discussion on their understanding of a given subject. Depending on their understanding, this appointment takes between 15 to 60 minutes. This might seem time consuming but it cuts down on the professor’s time spent in setting and marking exams – and is impossible to cheat.

The need for greater trust was one of the motivations for the innovation of community-led schools in post-revolution Egypt. Poor education, high unemployment and political interference have all led to a low level of trust in the public education system in Egypt. Community-led schools are accredited by the Ministry of Education but the curriculum is set by local parents, teachers and community leaders, leading to a sense of ownership – and greater trust. The curriculum also covers more than literacy and numeracy, with greater focus on “life skills”, allowing for greater creativity.

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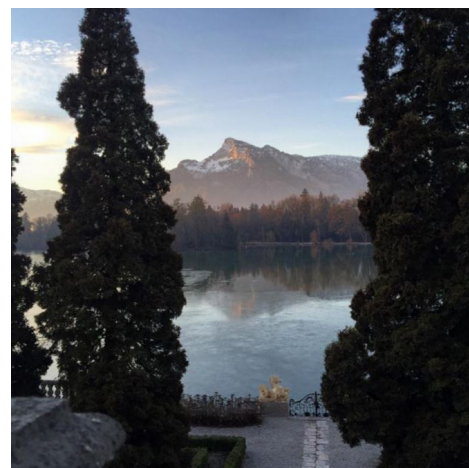
If you do intend to write for your own organization either whilst you’re here or after the session, please make sure to observe the **Chatham House Rule** (information on which is in your Welcome Pack). If you’re in any doubt, do not hesitate to contact Louise.

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Joe Hallgarten, director education at the RSA

Joseph Hallgarten - “Assessment is an act of love”

Director of education at the Royal Society of Arts (RSA), discusses the purposes of assessment and scaling for adaptation rather than adaption

Heather Jaber

Conceptions of creativity bring to mind an unbounded and imaginative process, one that is dynamic in nature. But how, if at all, do we assess that process? How do we encourage a creative learning experience while supporting wiser decision-making? Quoting Carlina Rinaldi, Joe Hallgarten reminds us that foremost, “Assessment is an act of love.”

Hallgarten, a participant of *Untapped Talent: Can Better Testing and Data Accelerate Creativity in Learning and Societies?*, is the director of education at the Royal Society of Arts (RSA) in the UK. The RSA, a prominent “think and do tank”, helps launch ideas into action, supporting human creativity for social change. Hallgarten runs the education strand of the organization, working with research, program development for teachers and learners, and other initiatives which encourage creativity and innovation.

“I think the challenge is that the assessment of our creative capacities has got a long history of failure,” he said. “There is a tension there about whether you can have a generic

assessment of creativity or whether it has to be domain specific. I also think it is dangerous sometimes when you are moving toward assessing creativity and you begin to conflate creativity with problem solving – they are different things.”

While there are no generic or universal methods of assessing creativity, Hallgarten highlighted three purposes of assessment.

“One is around supporting selection and certification,” he said. “The second is around accountability so that you know how schools and teachers are performing; and the third, and the most important to me, is supporting learning – really supporting good teaching and learning.”

The creative process and outcomes rely on three things, said Hallgarten – trust, collaboration, and unpredictability. The issue with schools today, he said, lies in the constraints they face in order to be reliable, leading to a loss of unpredictability.

“We know from the cognitive and developmental science,” he said, “that it is really important to retain a level of unpredictability over the learning process and outcomes; because that

is what engages young people, and that is what leads to wildly higher expectations and wildly higher performance.”

A recent RSA report tackling the issue of innovation in school systems offered suggestions for schools interested in innovative approaches, including developing teachers’ skills to encourage thinking, allow innovation in the assessment of a broader set of outcomes, and build a case and powerful alliance for change.

“Essentially, top-down innovation doesn’t work particularly well,” said Hallgarten. “And even when you’re scaling innovation, you do need systems to support scaling, but actually, you need to scale for adaptation rather than adaption, because teaching is ultimately about human relationships.”

System-level innovation cannot occur without foundational support for radical change, he said. In this sense, it is important to consider the more subtle factors in educational reform. “Where do we want power to lie in our education systems?” he asked, “How can assessment systems support wherever we think power should be?”



James Anyan, Yasmine Ibrahim, Mary Goretti Nakabugo and Sandeep Pandey

Hot Topic: “What innovations have there been in your region?”

Ana Alania & Heather Jaber

“Structural education reforms, combined with a push by educational stakeholders for more transparency and evidence-based policies, have motivated governments across **Latin America** to invest resources in the development of monitoring and evaluation systems. However, there continues to be wide variation in the quantity and quality of data across countries in the region.”

Gregory Elacqua

Principal Economist, Education Division, Inter-American Development Bank, USA

“I think one interesting area for innovation in getting students to enter into science and technology fields is to understand how to widen pathways for students to enter those fields from outside fields...Many universities [in the **USA**] require students to take, say, two semesters of science, two semesters of math by the time they graduate, but they don't specify when, and so you might be able to take a math class in college and that might foster your interest in the field, but not sufficient enough to create pathway... Graduation requirements might be better suited as early college requirements.”

David Miller

Psychology PhD student & NSF Graduate Research Fellow, Northwestern University, USA

“I think in education learning is more important and sometimes the examinations, which are based on the idea of a competition, do not reflect the true learning. So, I think we should just do away with the competition-based examinations and have an evaluation process which is noncompetitive, interactive, one to one, so that you can actually test the learning, and I have been doing this in **India** and the results are quite encouraging, the students like it and they also said there is more learning.”

Sandeep Pandey

Social Activist, India

“Education systems in **Africa** are largely examination-oriented, focusing more on testing memorization and less on assessing creativity. Can better testing and data in these contexts accelerate learning? YES! If the examinations and tests are improved to focus on assessing and rewarding creativity, teachers and children will also engage more in creative activities. What gets measured and rewarded, gets done.”

Mary Goretti Nakabugo

Country Manager, Twaweza East Africa, Uganda

“[Teachers] are at the center of the innovation process. But, they often show resistance to innovation because

they defend the tradition and the habits of teaching... Innovation could be trying to think how to put this habit in a different context, using the same tools, for example in teaching, in transferring information, in collecting feedbacks from students, changing the context, the frame...I have a role as a scientific advisor in one of these professional associations [in **Italy**] and we all try, on a peer base, to be creative innovators, changing the frame but keeping the habit, keeping the method.”

Maddalena Colombo

Member of the Board, Health, Human Care and Social Cultural Assessment, Univerita Cattolica, Italy

“**Egypt** has made significant improvements in meeting the millennium development goals in areas of basic education and closing the gender gaps between girls and boys in school enrollments. But unless a national and a comprehensive educational reform revolution is implemented, and unless education becomes a top priority in the government's national agenda, the future may be quite limited in meeting competitive global market demands.”

Yasmine Ibrahim

Graduate Recruitment and Fellowships Officer, American University of Cairo, Egypt