

the BlueDot

Exploring new ideas for a shared future



Rewiring the brain to be future-ready

Integrating 21st century skills in
education systems towards developing
peaceful & sustainable societies

Features

- LIBRE – an ‘integrated brain’ approach to education
- The essential qualities for our youth:
a foreword by the Minister of HRD, Government of India
- A Future-Ready Mind: Why Mindfulness, Empathy and
Compassion in Education Matter Now More Than Ever
- Critical Inquiry and Inquiry-Oriented Education

The BlueDot

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THE BLUE DOT features articles showcasing
UNESCO MGIEP's activities and areas of interest.
The magazine's overarching theme is the relationship
between education, peace, sustainable development
and global citizenship. THE BLUE DOT's role is to
engage with readers on these issues in a fun and
interactive manner. The magazine is designed to
address audiences across generations and walks of
life, thereby taking the discourse on education for
peace, sustainable development and global citizenship
beyond academia, civil society organisations and
governments, to the actual stakeholders.

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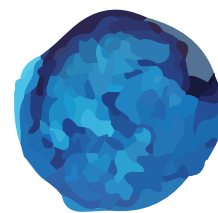
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"Look again at that dot.
That's here. That's home. That's us.

On it, everyone you love,
everyone you know, everyone you ever heard of,
every human being who ever was,
lived out their lives.
The aggregate of our joy and suffering,
thousands of confident religions,
ideologies, and economic doctrines,
every hunter and forager, every hero and coward,
every creator and destroyer of civilization,
every king and peasant, every young couple in love,
every mother and father, hopeful child,
inventor and explorer, every teacher of morals,
every corrupt politician, every superstar,
every supreme leader, every saint
and sinner in the history of our species lived there-
on a mote of dust suspended in a sunbeam."

CARL SAGAN

PALE BLUE DOT: A VISION OF THE HUMAN FUTURE IN SPACE



Making the young 'future ready' for a peaceful and sustainable world

The future of our world lies in the hands of the youth – with over three billion people below the age of thirty-four. For more peaceful and sustainable societies to foster, the bulge of this youth demographic will play a vital role in dealing with changing environments and the challenges of the 21st century.

To contend with issues such as exponential economic growth, increasing population, globalisation and rising inequalities, education systems will play a crucial part in equipping the youth with suitable skills to make them 'future ready'. Education systems need to transform themselves to empower the young with socio-effective skills that will help them effectively and efficiently respond to these challenges.

A report released in 2015 by the World Economic Forum (WEF) titled 'New Vision for Education – Unlocking the Potential of Technology' highlighted that in a technology driven world, students must possess competencies such as critical thinking and collaboration and character qualities including curiosity and adaptability in addition to the language arts, mathematics and sciences. Subsequent studies and reports by the WEF re-enforced these results, identifying the need for education systems to impart socio-emotional skills to complement the 'technical skills'.

Based on existing research in the neurosciences, UNESCO MGIEP has identified

four competencies that it believes the youth need to be equipped with to effectively address the challenges of the 21st century – including critical inquiry, mindfulness, empathy and compassion, which form the new integrative curriculum of UNESCO MGIEP's LIBRE programme.

In the sixth issue of the Blue Dot, we focus on the importance of these 21st century skills for the young. The issue includes a foreword by the Minister of Human Resource Development, Government of India on the importance of inculcating 21st century skills in education systems and our Cover Story, which introduces UNESCO MGIEP's LIBRE programme that follows an 'integrated brain' approach to education. Additionally, we feature opinions by specialists from academia, research and the industry on the lacuna present in existing education systems and the opportunities available to address this gap by introducing socio-emotional skills and inquiry oriented learning into curricula. Amongst various experts, we hear from Ines Kudo and Joan Hartley from The World Bank on the importance of 'Teaching empathy and compassion in schools'; Prof. K.P. Mohanan on 'Critical Inquiry and Inquiry oriented education' and Dr. Marilee Bresciani Ludvik on how mindfulness forms the foundation for cultivating compassion.

Further, we present excerpts from a collection of 'Ask me Anything' sessions focused on socio-emotional skills, hosted on Knowledge Commons, UNESCO MGIEP's knowledge sharing platform. We have been honoured to have the opportunity to host and learn from experts such as Dr. Richard Davidson, recognised as one of 'The 100 most influential people in the world' in 2006 by the Time Magazine and Chade-Meng Tan, currently the Chairman of Search Inside Yourself Leadership Institute and Co-chair of One Billion Acts of Peace, which has been nominated eight times for the Nobel Peace Prize.

I hope you enjoy reading this issue of The Blue Dot and, as always, look forward to your feedback in order to improvise future editions of the magazine.

ANANTHA KUMAR DURAIAPPAH
Director, UNESCO MGIEP

In the sixth issue of the Blue Dot, we focus on the importance of the **21st century skills for the young.**

The essential qualities for our youth for the 21st century



Prakash Javadekar
Minister of Human Resource
Development, Government of India

As we progress to the twenty-first century, there is a lot to look forward to. At the same time various issues that face our country and the world, require our immediate attention. Some of these are climate change, biodiversity loss, rise in violent extremism and inequality.

India is in a unique position to take the lead in addressing these global issues, with its relatively young population, which I believe is a key advantage. By 2020, the average age in India will be twenty-nine and it is set to become the youngest country in the world with 65% of its population below

the age of thirty-five. The youth of the country offer a tremendous opportunity for driving social, environmental and economic progress not only in India but also globally. It is crucial however, that young people be equipped with the appropriate skill sets to undertake this challenge and towards this the education system is our best bet.

Unity in diversity has been the Indian motto for many years and India, as a melting-pot of diverse systems and cultures presents itself as an ideal example to the rest of the world to showcase a new education system, which will focus on teaching humanity. The establishment of the Mahatma Gandhi Institute of Education for Peace and Sustainable Development (MGIEP) in 2012 by the Government was envisioned as a step forward in this direction since the Institute bases its initiatives on the values that Mahatma Gandhi stood for, namely that of building peaceful and sustainable societies. I am very pleased that the Institute is taking its mandate very seriously and is building a new curriculum to address the



Youth need to have the ability and courage to question, assess and evaluate issues to arrive at the most peaceful and optimal solutions.

To do so they require skills not only of critical inquiry but also socio-emotional competencies. They need to be mindful of the global environment and its intercultural diversity.



global challenge of peace and sustainable development drawing from the latest evidence from neurosciences, education psychology and digital pedagogies.

The Blue Dot, Issue six focuses on ‘Critical Inquiry, Mindfulness, Empathy and Compassion’, which are four core competencies that the Institute has

identified for youth to address twenty-first century challenges and opportunities.

These competencies form the basis of all the projects and programmes conducted at the Institute and are extremely relevant for the youth of today.

I wish the Institute all the best in this important endeavour.



EDUCATION FOR PEACE,
SUSTAINABLE DEVELOPMENT
AND GLOBAL CITIZENSHIP

“ It is crucial however, that young people be equipped with the appropriate skill sets ... for driving social, environmental and economic progress not only in India but also globally



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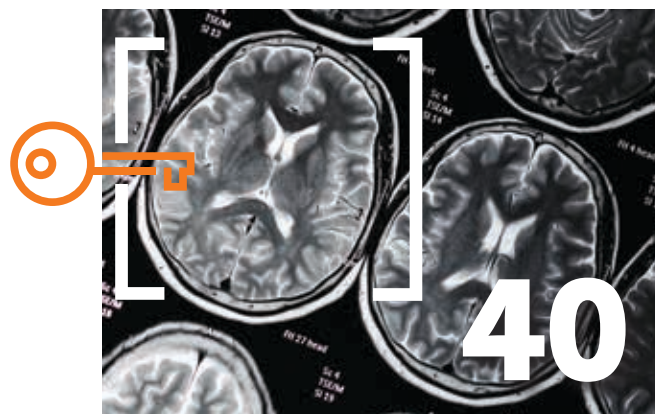
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Critical Inquiry and Inquiry-Oriented Education



K.P. Mohanan received his Ph.D. from the Massachusetts Institute of Technology (MIT) and taught at the University of Texas in Austin, MIT, Stanford University and the National University of Singapore (NUS). At NUS, he initiated the General Education Programme for undergraduate students and, as part of this programme, created a web course on Academic Knowledge and Inquiry.

In January 2011, he moved to IISER-Pune, where he created a three-course package on rational inquiry, covering scientific, mathematical, and conceptual inquiries. He is currently engaged in developing courses and programmes on different types of inquiry-based learning for high school and college students.

Education for Non-Violence

.....
 **K.P. Mohanan**

Human violence has multiple roots. Someone who stabs another in a fit of road-rage is acting under blind emotions.

Someone who cannot kill humans but is prepared to kill animals has not expanded the scope of their ethical considerations beyond humans. And someone who wages war against another country is guided by ideological or economic factors, unaffected by ethics. To deal with violence, then, education must incorporate strands that aim at the emotional, ethical and intellectual foundations for peace.

Educating emotion requires helping the young liberate themselves from negative emotions such as anger, hostility, hatred, cruelty, intolerance, selfishness and competitiveness, while strengthening positive emotions such as empathy, compassion, love, and the spirit of altruism.

Educating the intellect for peace involves helping learners protect themselves from ideologies of violence. It should also empower them to change systems and practices that either promote violence or fail to prevent violence.

Ethical foundations draw on both emotion and intellect. Enriching the natural ethical instincts is a matter of emotions. Expanding the scope of ethical considerations is a matter of both emotions and reasoning. And connecting ethical values and principles to one's actions and practices is a matter of reasoning.

In sum, we need a form of education that combines the emotional and the intellectual. In this article, my concern is with the intellectual part.

Intellectual education needs to include not only the information and knowledge to work towards a non-violent world but also the abilities of critical thinking and inquiry to investigate the causes of violence, and

Intellectual education needs to include . . . the abilities of critical thinking and inquiry to investigate the causes of violence and to find ways to dissolve those causes.

to find ways to dissolve those causes. This means that *Inquiry-Oriented Education* (IOE), which seeks to develop the capacity for rational inquiry, has to be recognised as an important strand of education. What follows are my reflections on the role of rational inquiry in education and of *critical inquiry* as a specific form of rational inquiry.

What is Rational Inquiry?

Inquiry is the investigation of a question on the basis of our own experience and reasoning, to look for an answer and arrive at a conclusion.

It involves:

- Questions whose answers we wish to find out
- Methodological strategies to look for answers
- Answers to the questions, and conclusions based on them
- Rational justification (proof, evidence, arguments) for the conclusions
- Thinking critically about our own or others' conclusions and justification

Rational inquiry is inquiry that is committed to the following axioms:

- **Rejecting Logical Contradictions:**
We must reject statements that are logically contradictory
- **Accepting Logical Consequences:**
If we accept a set of statements, then we must also accept their logical consequences

By 'logical contradiction', we mean a combination of a statement and its negation. Thus, the statement that the earth is flat and the earth is not flat

constitutes a logical contradiction.

A logical consequence of a set of statements is a conclusion derived from them through logic. Thus, the conclusion that all humans are vertebrates is a logical consequence of these statements: (i) all humans are primates; (ii) all primates are mammals; and (iii) all mammals are vertebrates.

For readers who wish to go beyond this brief sketch, a wide range of examples of rational inquiry for school and college education are available at www.schoolofthinq.com

What is Critical Inquiry?

There are many situations where we do not realise our ignorance. We also take many beliefs and practices for granted, without questioning. When we subject such domains to critical thinking, we are pursuing **a special kind of rational inquiry, called *critical inquiry*, which begins with doubting and questioning what has been taken for granted (analogous to 'interrogating/ cross-examining' an 'expert witness' including ourselves) and demonstrating that we don't know what we think we know.**

Questions for critical inquiry are triggered by critical thinking. *Critical thinking* is a set of mental processes for evaluating the merit of something. 'Merit' here could be the *truth* of a statement (e.g., the statement, 'That the earth is round' is true.), the *usefulness* of a product, action, practice, or policy to achieve a given goal (e.g., death penalty to effectively deter crime), the *ethical desirability* of an action, practice, or policy (e.g., the ethical rightness of the death penalty), the *beauty* of a work of art (e.g., Is da Vinci's Mona Lisa a great painting?), or the *value* of something that we (ought to) strive for (e.g., we ought to liberate ourselves from anger and hatred).



Inquiry-Oriented Education, which seeks to develop the capacity for rational inquiry, has to be recognised as an important strand of education.

Figure 1

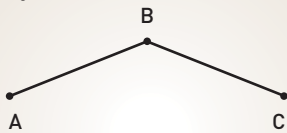
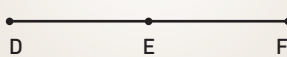


Figure 2



Examples of Critical Inquiry

Critical inquiry into issues of terrorism, communal violence, forced migrations, xenophobia, nationalist and religious ideologies that promote violence, and the relation between economic policies and violence, are of direct relevance to education for peace. Such issues, however, are emotionally charged. They might be seductive for beginners, but precisely because of their emotional appeal, there is a danger that when investigating them, feelings replace thinking and assertions of personal opinions replace rational conclusions.

My experience suggests that for beginners to engage with such topics with adequate detachment, clarity and rigour, they need to strengthen their mental equipment in two ways: by striving for emotional maturity, in order to detach feelings from reflection and reasoning; and by strengthening and sharpening their intellectual capacity, using topics that would not create emotional storms.

Mathematical and scientific inquiries offer fruitful emotion-free terrains for the practice of critical inquiry. Let me sketch an example.

① Angles and Triangles

Suppose we begin a class activity for eighth graders with an innocent-sounding question: *How many angles does a triangle have?* The textbook answer is: Three. We can now initiate critical inquiry: *What is an angle such that triangles have three angles and rectangles have four?*

Most novices would think of this as a trivial question. But then, the function of critical inquiry is to challenge complacency.

What is an angle? A student's answer might be: "If two straight lines meet in such a way that they do not form a single straight line, what lies between them is an angle." If so, the combination of two straight lines in Fig. 1 forms an angle, but not in Fig. 2.

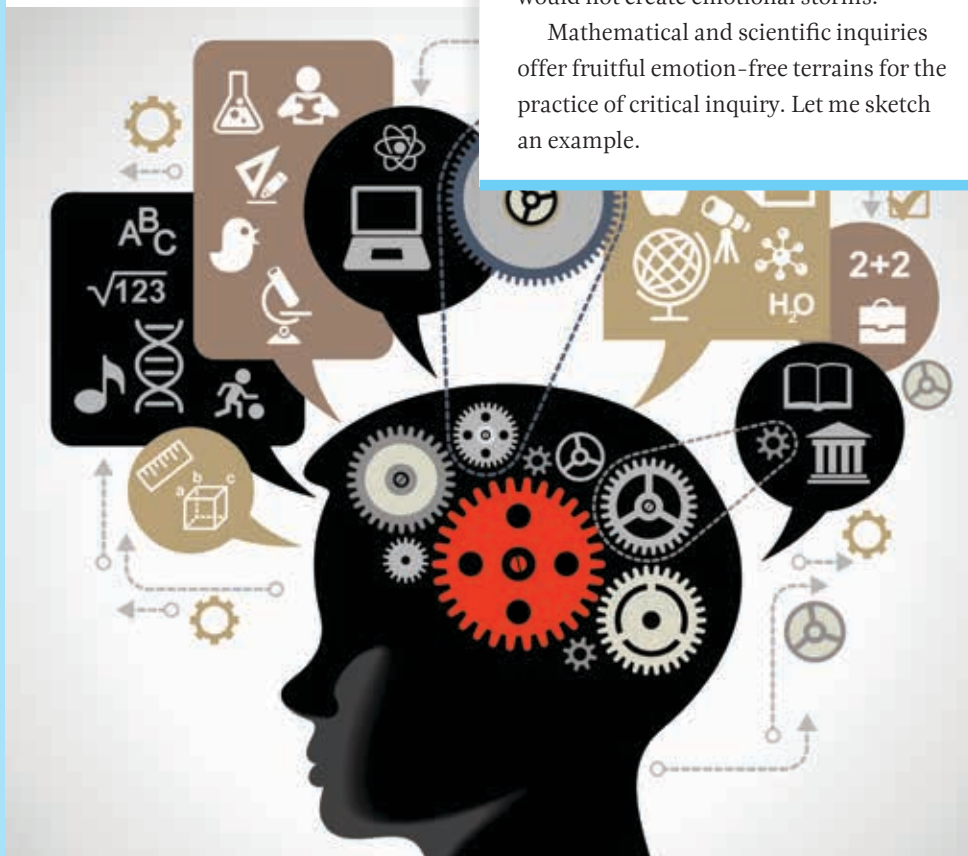
What is a right angle? What is an acute angle? What is an obtuse angle? What is a straight angle? The standard textbook answers are: "A right angle measures 90° "; an acute angle is less than a right angle; an obtuse angle is more than a right angle (but less than two right angles); and a straight angle is two right angles."

We now proceed to rigorous reasoning. Given these 'definitions', it follows that angle ABC in Fig. 1 is an obtuse angle; while angle DEF in Fig. 2 is a straight angle. Since any straight line can be viewed as being made up of two straight lines at a straight angle, there is a straight angle at every point in a straight line.

How many angles does a straight line have? Since every finite straight line has infinitely many points, it has infinitely many straight angles. Therefore, it has infinitely many angles. Since a triangle is made of three straight lines, it has infinitely many angles. This conclusion negates the textbook answer to the question we started with.

We now have to either accept the conclusion that triangles and rectangles have infinitely many angles, or re-define the concept of angle such that we abandon the concept of straight angle from the textbook.

Mathematical and scientific inquiries offer fruitful emotion-free terrains for the practice of critical inquiry.





If schools around the world could engage in discussions pursuing rational inquiry into principles and concepts of ethics, there would perhaps be far less violence in the world.

This begins an inquiry into questions whose answers we realise we don't know: *What is an angle?*

This example illustrates the strategy of 'problematisation' in critical inquiry: we begin with questions on what we think we know and take for granted; we engage critically with the answer; and realise that we don't know what we thought we knew, triggering further inquiry.

As I said, math and science offer rich terrains for emotion-free practice of critical inquiry. Once learners acquire the necessary sharpness and strength of mind, they can be guided into critical inquiry in emotion-riddled terrains. We now explore two such examples.

② Freedom Fighters and Terrorists

We give students the following hypothetical story.

Suppose a country, Arraya, rules over an island, Parumbi. The people of Parumbi don't want Arraya to govern them, but the people of Arraya want Parumbi under them. Parumbians take up arms to achieve their goal. Their supporters describe them as 'freedom fighters', and their activity as an 'independence struggle'. But the government of Arraya and its supporters describe them as 'terrorists', and their activity as 'terrorism'.

We then give them the following real world story:

An article, "Terrorism, Not Freedom Struggle" (*The Times of India*, 10 August 2001) stated that "rejecting Islamabad's description of terrorism in Jammu and Kashmir as freedom struggle," India's external affairs minister said that under no circumstance should India accept "Islamabad's attempt to confer cross-border terrorism a kind of diplomatic legitimacy¹..." Pakistan's newspaper *Business Recorder* quoted Harry Truman as having warned that "once a government is committed to silencing the voice of dissent, it has only one way to go. To employ increasingly repressive measures, until it becomes a source of terror to all its citizens and creates a country where everyone lives in fear." It went on to say: "Nothing illustrates the Indian policy, vis-à-vis occupied Kashmir, better than the above quoted remark of the American leader²."

The students' task is to spell out how we would distinguish between 'freedom fighters' and 'terrorists' and to define 'terrorism' and 'independence struggle' such that we can engage in a rational debate on whether a particular movement qualified as an independence struggle or as terrorism.

③ Nation and Nationalism

Activity 1

Write down the answers to the following questions: What is your nationality? Do you feel good when you hear your national anthem or see your national flag? Are there nations that you dislike or are hostile to? Write the names of those nations.

Activity 2

Now consider the following question: What is a nation?

Discussion: Two meanings of the term 'nation' emerged:

- **People-nation:** nation as a people united by a shared ancestry, language, and culture. (e.g. 'Naga-nation,' 'Navaho-nation,' 'Palestine as a stateless nation'). People-nation prompts loyalty and, devotion to the people with shared ancestry, language, and culture.

¹ <http://timesofindia.indiatimes.com/india/Terrorism-not-freedom-struggle-Jaswant/articleshow/1086523490.cms>

² http://www.brecorder.com/index.php?option=com_news&view=single&id=1108304



A promising avenue for emotion-education is perhaps something along the lines of mindfulness meditation: 'looking' internally at the contents of one's own experience ...

Watch the following YouTube videos:

- **History of Europe: 6013 Years in 3 Minutes** (https://www.youtube.com/watch?v=uxDyJ_6N-6A)
- **The History of North America: Every Year** (<https://www.youtube.com/watch?v=0IKcS4DlaTw>)
- **The History of India: Every Year** (<https://www.youtube.com/watch?v=QN41DJLQmPk>)

• **State-nation:** nation as a government that rules a population in a given geographical region. (e.g. India, Pakistan, Vietnam, South Korea, United States of America, Australia, Nigeria, Argentina, and Germany). State-nations are results of war, conquest and power negotiations; they don't require shared ethnicity, language, or culture.

Activity 3

Consider the concept of nationalism: We may define it as: *a form of collective identity that prompts loyalty and devotion to one's nation.*

Discussion: Given the two distinct concepts of nation, we needed to recognise the corresponding concepts of nationalism: people-nationalism and state-nationalism. People-nationalism might perceive the rulers as 'foreign', prompting the political separation of one's people from those rulers. State-nationalism would perceive those involved in that separation as 'traitors'. State-nationalism then is loyalty and devotion to one's rulers and is identical to 'patriotism'.

Activity 4

Let us go back to the questions we asked earlier: **What is your nationality?**
Do you feel good when you hear your national anthem or national flag?

Discussion: Is your concept of nationality grounded in people-nation or state-nation? Do you feel good when you hear the national anthem or see the national flag? Do you feel patriotism rise in your heart? Does that feeling come from loyalty to the people, or to the state?

Activity 5

Now let us do a thought experiment. Imagine that the Second World War was won by Germany, Italy and Japan. The 'Allies' lost. If that were the case: What would your nationality be now? Which national anthem and national flag would produce feelings of patriotism in

your grandchildren? Which nations are your grandchildren likely to hate?

Now answer the same questions by assuming that there were no wars anywhere in the world after the tenth century, and that the political map continued without change till today.

After thinking through these questions, go back to the concepts of state-nation and peoples-nation and write a one-page reflection on the concepts of nation, nationality, nationalism, and patriotism, and the role of violence in the origin and evolution of nations.

An Example of Ethical Inquiry

As a form of rational inquiry, ethical inquiry seeks to help develop the capacity to construct and evaluate ethical theories at individual and collective levels and to deduce the ethical judgements derived from those theories.

In a class session that I did for 6th Graders in Pune, India, the children came up with this ethical principle: *It is immoral to kill humans and other creatures.* During the subsequent discussion, one child said that the principle doesn't apply to enemies. The entire class agreed that it is okay to kill enemies. The principle was revised as: *It is immoral to kill fellow creatures other than enemies.*

Some students even suggested that killing enemies is our ethical duty. This resulted in the following dialogue: (teacher | student/s)

So, would you kill your enemies?

Yes.

Does anyone here have any enemies in this class?

Oh, no.

Contemplative Inquiry

As mentioned earlier, the education of emotions has an important role to play in minimising human violence. A promising avenue for emotion-education is perhaps something along the lines of mindfulness meditation: 'looking' internally at the contents of one's own experience, including sensory and non-sensory experience, as well as the experience of emotions. Meditative techniques such as attending to breathing, body scan, loving-kindness and observing thought are forms of looking at the inner world³.

The so-called *contemplative inquiry* in this tradition is a form of rational inquiry that takes the results of such introspection as the grounds of inquiry to arrive at rational conclusions about oneself. This allows us to address questions as, "Am I a covert racist?" "Am I as ethical as I think?", "Do I carry hatred in me?", as part of inquiry into a fundamental question: "Who am I?"

Instead of merely experiencing emotions such as anger or hostility, we can employ contemplative inquiry with the rational-perceptual part of the mind examining with equanimity the emotional suffering part. The outcome of attention then forms the basis for rational investigation of oneself.

Inquiry-Oriented Education

Helping the young to develop the capacity to engage in these diverse modes of rational inquiry, combined with practices that enhance positive emotions and dissolve negative ones, is an imperative that institutionalised education can no longer afford to ignore in today's world. Mathematical, scientific, conceptual, ethical and contemplative inquiries play significant roles in this enterprise, which would involve incorporating the strand of Inquiry-Oriented Education into schooling at the primary, secondary, as well as tertiary levels. UNESCO MGIEP has currently undertaken such a move in a collaborative endeavour with ThinQ⁴ in its LIBRE programme.



At this point, they were no longer sure about their position on enemies. I gave them a few minutes to discuss the problem in groups and come up with a concept of 'enemy' such that killing enemies is okay. After some discussion, most groups came up with the following statements:

Those who want to kill others are our enemies.

Those enemies exist in both India and Pakistan.

I would have liked to raise the question: Is it morally right to kill someone who has killed another? This could have taken us to fairly complex issues like mercy-killing, honour-killing, war, abortion and death penalty. I did not pursue that line of inquiry, for I wasn't sure if it was age-appropriate for the children.

If schools around the world could engage in discussions of this kind, pursuing rational inquiry into principles and concepts of ethics, there would perhaps be far less violence in the world.

Do you have enemies in this school?

No.

In Pune?

No.

In Maharashtra?

No.

In India?

No.

Looks like you don't have any enemies. Who are your enemies?

Pakistanis.

Hm, so will you kill Pakistanis?

Yes.

Okay. Now, right now, as we are speaking, a 6th grade class session is going on in a school in Pakistan. Shall we go and kill those children?

No, you shouldn't kill children.

But you said we must kill our enemies. And Pakistanis are our enemies. And those children are Pakistanis.

Children are not enemies.

Oh, okay. So let's go and kill their parents.

No, you shouldn't kill the parents. Who will take care of the children?

Then who in Pakistan are your enemies?

Pakistani soldiers!

But many of soldiers are parents. And all of them have parents, and perhaps siblings. Do you really want to kill them?

³ http://greatergood.berkeley.edu/article/item/how_to_choose_a_type_of_mindfulness_meditation

⁴ www.schoolofthing.com

A Future-Ready Mind



 **Dr. Rich Fernandez**



Dr. Rich Fernandez is the CEO of the Search Inside Yourself Leadership Institute (SIYLI), a non-profit organisation originally developed at Google that now offers mindfulness and emotional intelligence training to communities and organisations around the world. Dr. Fernandez also co-founded Wisdom Labs, an organisation that brings the science of mindfulness, resilience and thriving into organisations.

Previously, Dr. Fernandez was the Director of Executive Education at Google and the Head of Learning and Organisation Development at eBay. Prior to his work in the technology sector, Rich was a Learning and Leadership Development Executive at J.P. Morgan Chase & Co. and at Bank of America.

Dr. Fernandez was trained as a psychologist and received his Ph.D. from Columbia University, with a focus on Organisational Psychology. He is also an author and frequent contributor to Harvard Business Review, a neuroscience enthusiast and a long-time trained and certified mindfulness practitioner and teacher.

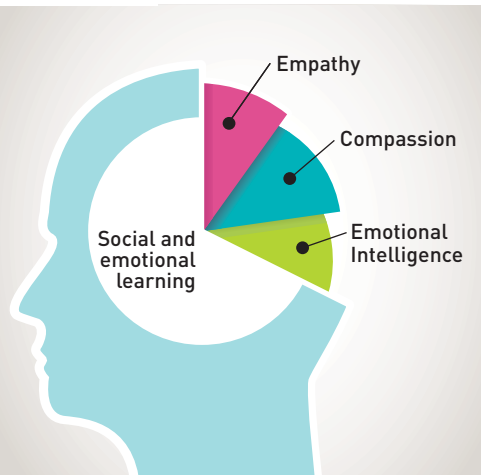
WHY MINDFULNESS, EMPATHY AND COMPASSION IN EDUCATION MATTER NOW MORE THAN EVER.

In the past decade we have seen a sharp rise of interest in secular, science-based mindfulness practices in both the public and private sector organisations and educational settings around the world. Mindfulness trainings are now offered in organisations as diverse as Google, Starbucks Coffee Company, The United Nations, The World Bank, public schools in the United States and the British Parliament. This spike in interest is no accident as some of the latest neuroscience, genomic and behavioural research suggest that the practice of *mindfulness* can systematically train the brain and create useful mental habits that promote resilience, performance effectiveness and social and emotional intelligence, including empathy and

compassion. This trend of mindfulness in educational and workplace settings is likely to continue as evidence suggests these skills are increasingly important for current and future success in life and work.

Particularly interesting is the growth of mindfulness programmes for both teachers and school-aged children. Mindfulness curriculums, which include social and emotional learning components that develop empathy, compassion and emotional intelligence are now being taught in elementary through high schools around the world. Mindful Schools, for example, has taught its evidence-based mindfulness curriculum to over 1 million school-aged children worldwide. The efficacy of the Mindful Schools programme was studied in one of the first-ever large, randomised-controlled studies on mindfulness in

MINDFULNESS CURRICULUMS, which include social and emotional learning components help **develop empathy, compassion and emotional intelligence.**



children and the research found statistically significant improvement in paying attention and participation in class versus the control with just 4 hours of mindfulness instruction for the students. Similarly the **Mind Up Programme**, which is based on neuroscience, mindful awareness, positive psychology and social-emotional learning has been taught to over 1 million children across 4 continents and is seeing similar positive benefits. In fact, there is increasing evidence that suggests that the effects of developing the core life and work skills associated with mindfulness help improve not only empathy and compassion but also performance and happiness both in school and workplace settings.

Children who learn mindfulness skills as early as kindergarten, for example, were found to experience long-term benefits including improved education,

employment, crime, substance abuse and mental health outcomes in adulthood¹. Other outcomes for school-aged children include improved attention and focus², better grades³ and better behaviour in schools⁴. Finally, mindfulness training in schools has shown to improve emotion regulation in children⁵, empathy and perspective taking skills⁶ and social skills overall⁷. The evidence is quite clear: training in mindfulness, empathy and compassion helps children and adults develop a future-ready mind by preparing them for the ever increasing complexity and demands of a world changing more rapidly now than at any other point in human history.

Currently in my work as the CEO of the Search Inside Yourself Leadership Institute (SIYLI), a non-profit organisation that grew out of Google to make the mindfulness and emotional intelligence curriculum taught at Google available to organisations around the world, we see the demand for mindfulness, empathy and compassion trainings growing at an exponential rate. Most organisations come to SIYLI requesting mindfulness and emotional intelligence trainings because, like Google, they see that mindfulness can serve as a foundation not only for well-being, resilience and flourishing but also as a catalyst for greater focus and emotional intelligence, conflict management, collaboration and influencing skills in fast-paced, high performing settings.



Most organisations come to SIYLI requesting mindfulness and emotional intelligence trainings because . . . they see that mindfulness can serve as . . . a catalyst for greater focus, emotional intelligence, conflict management and collaboration



↓ Mindfulness and emotional intelligence trainings in progress at SIYLI.



“Always-on, multi-tasking work environments are killing creativity, dampening productivity and making us unhappy.

Mckinsey Quarterly

In this context of always-on work cultures, mindfulness can be a powerful antidote.

↑ Mindfulness helps draw attention to internal experiences and assists in dealing with stress at the workplace, thereby enhancing productivity

In many ways, mindfulness, empathy and compassion help people deal with the increased pace and intensity of a technologically-enabled, hyperconnected world. The challenges of contemporary work cultures are described well in Mckinsey Quarterly which notes that, “always-on, multi-tasking work environments are killing creativity, dampening productivity and making us unhappy.” In this context of increasingly hyperconnected, always-on work cultures, mindfulness can be a powerful antidote. According to the American Psychological Association, empirically supported evidence of the benefits of mindfulness include: stress reduction, enhanced focus, better working memory, higher cognitive flexibility, increased emotion regulation, decreased anxiety and increased empathy. It is no wonder that mindfulness offerings are growing as part of workplace learning and development programmes. And there is strong evidence to support the fact that

mindfulness, empathy and compassion create cultures of success in the workplace.

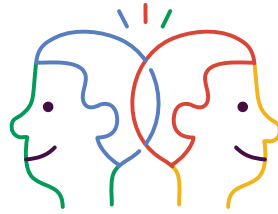
Mindfulness, empathy and compassion have been found to have significant impacts on employee performance, engagement and profitability, for example. In a ground-breaking study conducted by The University of New South Wales, which looked at 5,600 people across 77 organisations, researchers concluded that the ability of a leader to be compassionate – “to understand people’s motivators, hopes and difficulties and to create the right support mechanism to allow people to be as good as they can be” – had the greatest correlation with profitability and productivity in those organisations. Similarly, the Greater Good Science Center at the University of California, Berkeley found that compassion increases positive emotions, creates positive work relationships, and increases cooperation and collaboration at work.

...the benefits of mindfulness include: stress reduction, enhanced focus, better working memory, higher cognitive flexibility, increased emotion regulation, decreased anxiety and increased empathy.

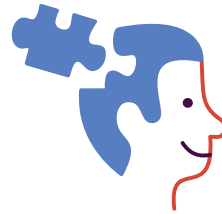
As per SIYLI, mindfulness and emotional intelligence skills helps you to:



Experience greater well-being, resilience and stress management



Improve performance, collaboration and empathy



Increase effectiveness and decision-making capacity



Cultivate innovative, creative thinking

The opportunity here is to develop a generation of children who have future-ready minds to meet the growing personal, social and planetary challenges they will face when they inherit the legacy of the world we live in today.

There is also mounting evidence to suggest that mindfulness benefits the bottom line results in organisations. In a pioneering study at Aetna Insurance Company, for example, more than 12,000 employees participating in mindfulness programmes offered by the company showed an average of 62 minutes per week of enhanced productivity, saving the company \$3,000 per employee annually. Additionally, social psychologists Laura Kiken and Natalie Shook, have found that mindfulness predicts judgment accuracy and insight-related problem solving. In a related study, cognitive neuroscientists Peter Malinowski and Adam Moore found that mindfulness enhances cognitive flexibility. Finally, in a wide-ranging study, organisational psychologists Erik Dane and Bradley Brummel found that mindfulness facilitates job performance. Interestingly, digital mindfulness training has also proved to be efficacious – in research conducted by preventive medicine

researchers Kimberly Aitken and her colleagues, results indicate that online mindfulness programmes have been shown to be practical and effective in decreasing employee stress, while improving resiliency and work engagement, thereby enhancing overall employee well-being and organisational performance.

In the dynamic work environments that exist now and into the future, mindfulness, empathy and compassion skills will be more important than ever for performance, collaboration and innovation. This is why mindfulness programming in educational settings, which have proved efficacious for school aged to high school students – are important to introduce into school curriculums. The opportunity here is to develop a generation of children who have future-ready minds to meet the growing personal, social and planetary challenges they will face when they inherit the legacy of the world we live in today.

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How mindfulness forms the foundation for cultivating compassion

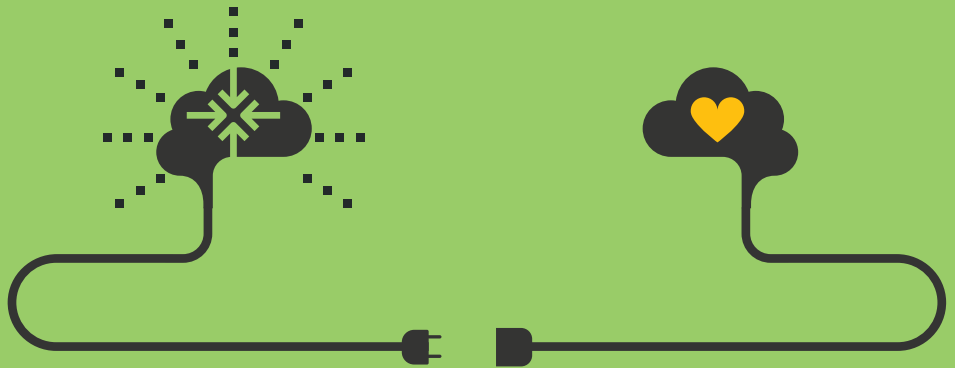
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 Dr. Marilee Bresciani Ludvik



Dr. Marilee Bresciani Ludvik holds a Ph.D. in Administration, Curriculum and Instruction from the University of Nebraska and a Masters of Arts in Teaching from Hastings College. She is currently a Professor of Postsecondary Educational Leadership at San Diego State University.

Marilee's most recent research focuses on using neuroscience to inform the design and evaluation of workshops and curriculum to decrease students', faculty, and administrators' stress and anxiety and increase their attention, emotion, and cognitive regulation, as well as enhance critical thinking, compassion, resilience, and creativity.

Dr. Bresciani Ludvik also currently serves as the UNESCO MGIEP Senior Research Fellow, where she is designing and evaluating mindful compassion curriculum that seeks to reduce violent extremism through education while fostering cross-cultural compassionate dialogue.



The Challenge

What is one thing that teachers from pre-kindergarten through college-level have in common across the globe? They all want their students to “pay attention!” The challenge is that many students are coming to class without ever having been equipped with the skills to pay attention – that is the ability to become aware of where attention is resting and direct it towards where it should go. This challenge is further amplified by the fact that students are also not provided with opportunities to adopt the strategies that would help them regulate the daily fluctuation of emotions common to learning. Add to

this, the increased complication of their experiencing a myriad of life emotions and the stress, anxiety, anger and frustration that often arise from these experiences. The result is a negative impact on students' learning and development. Ah wait... there is more... if you add to this the further complication of many adolescent-aged through young adult (12-22 years of age) students' inability to choose a wise action¹, even when they know that what they are doing is wrong, it is a wonder how any learning and development takes place at all.

What does all this have to do with the importance of cultivating compassion and the role of mindfulness within it? Well, we invite you to “pay attention” while we explain.

Research strongly suggests that emotions play a role in regulating and prioritising decision making for all of us throughout our lives...they also... appear to play a role in regulating what gets stored and recalled from short-term memory.

Stress, Anxiety, and Emotion

Experiences of stress, anxiety and certain kinds of emotion can activate a portion of the brain called the **amygdala**. The amygdala is a member of the limbic system, often referred to as the emotional centre of the brain. Another member of this emotional system of the brain is the **hippocampus** – a part of the brain that is a primary player in the storage and recall of short-term memory². When the amygdala is activated, the resulting impulsive and often unaware behaviour is fight, flight, freeze or fornicate. Furthermore, when the amygdala is activated, it recruits several parts of the brain, in essence putting them “off-line” in order to survive. Basically, the amygdala recruits the neural activity of the reasoning part of the brain (the pre-frontal cortex) so that it can instinctively tell the body to survive, rendering analytical decision-making somewhat inaccessible.

While research is still emerging, there is compelling evidence to suggest that the intentional cultivation of awareness of where attention is placed, attention towards how emotions are experienced in the body and attention towards the thoughts and beliefs associated with those emotional experiences can rewire

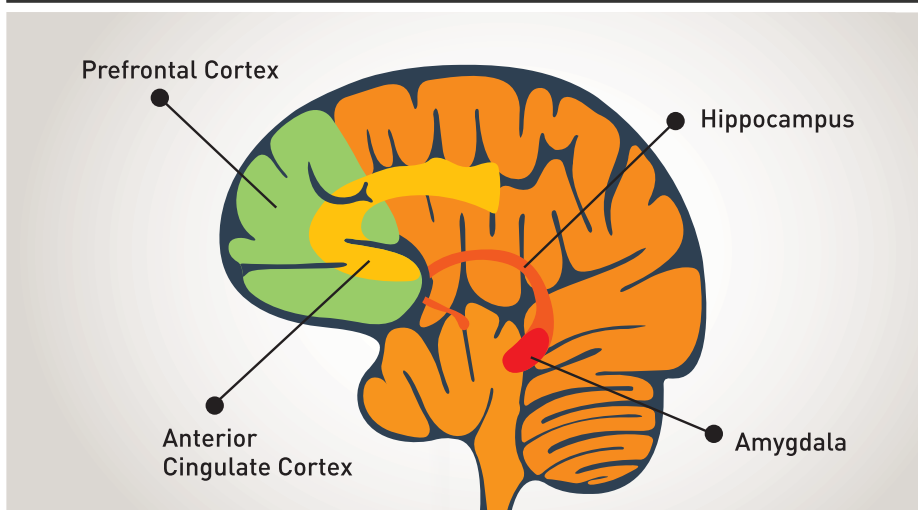
a reactive brain into a brain that consciously chooses a kind and wise response to any situation.

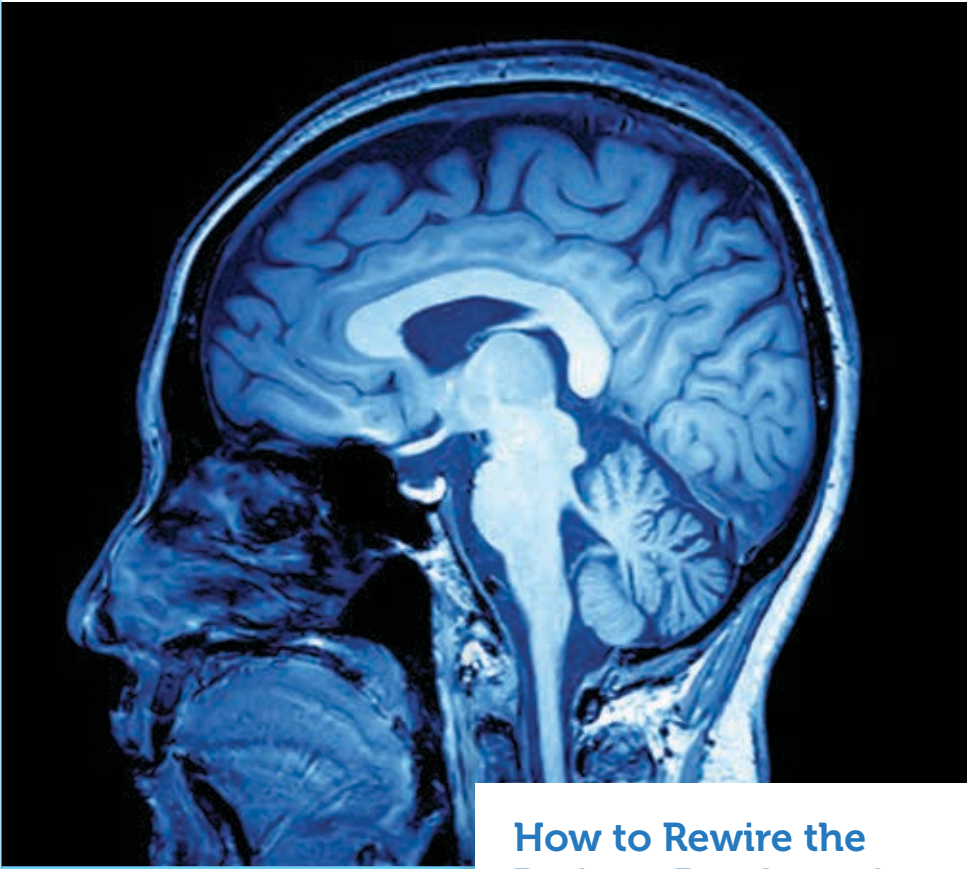
How?

For purposes of this article, consider this oversimplified definition that emotions are physiological sensations experienced in the body and processed in the brain³. Research strongly suggests that emotions play a role in regulating and prioritising decision making for all of us throughout our lives (unless we have been diagnosed with a particular brain phenomena)⁴. However, many of us have been told that bringing our emotions into our decision-making process is inappropriate in the school or work setting. Instead, we are supposed to be logical, analytical and methodological. In order to attempt to leave our emotions at the door, we have skillfully learned (without being taught explicitly) to suppress, deny, or avoid emotions, only to have them erupt later into perhaps unwelcomed anger outbursts or seemingly unrelated ways, such as overeating, avoiding doing something we know we are supposed to do, or even aggressive behavior. Avoiding, denying and/or suppressing emotions often has a negative correlation with our overall well-being and sometimes the well-being of others.

While emotions play a role in regulating the prioritisation of our decision-making, they also, as mentioned earlier, appear to play a role in regulating what gets stored and recalled from short-term memory. As such, emotions are worth paying attention to, however what if we don't know how to choose where to place our attention? So, when the teacher says, “pay attention,” we might actually not know how to do that on demand. And what if every time the teacher commands us to pay attention, we feel stress? This all undermines the ability to pay attention in a productive way.

NEUROPLASTICITY AND LEARNING





Mindfulness is known as one process that can intentionally rewire a reactive neural circuitry into one that chooses kind and wise responses.

How to Rewire the Brain to Pay Attention

Neuroplasticity, a term that is being referred to more often in popular media, can be defined as what we pay attention to and what we focus upon changes certain structures and therefore the corresponding functions of our brain⁵. **Put more simply, we become what we focus upon⁶.**

If I don't even know what I am focusing upon, I can't intentionally cultivate my becoming anything other than what I am instinctually designed to do - to survive. As a result, I lose awareness of the myriad of choices I actually have in any one moment and as a result, I give into the flight and fight reactivity of an emotionally run life.

Cultivating an awareness of where our attention resides and being able to re-direct that attention on demand optimises not only learning and development but the ability to intentionally change one's reactive neural process; it is a foundational practice to access the doorway to regulating emotion, understanding the relationship of

Neuroplasticity can be defined as "what we pay attention to and what we focus upon changes certain structures and therefore the corresponding functions of our brain."
Put more simply, we become what we focus upon.

experience with thoughts and beliefs, as well as being able to access kind choices. Mindfulness is known as one process that can intentionally rewire a reactive neural circuitry into one that chooses kind and wise responses.

Defined as the process of paying attention to what is happening right now with an attitude of curiosity and kindness⁷, mindfulness cultivates "awareness" of what is going on right here and now. This optimises the down regulation of emotional reactivity and the up-regulation of analytical reasoning to access prioritised choice. But how do we cultivate the selection of a kind and humane choice?

Compassion Cultivation

Building on mindfulness, compassion cultivation (or simply the fostering of empathy and offering kindness towards all human beings) seeks to build :

- 1 an awareness of another's emotional and physical suffering (attention)

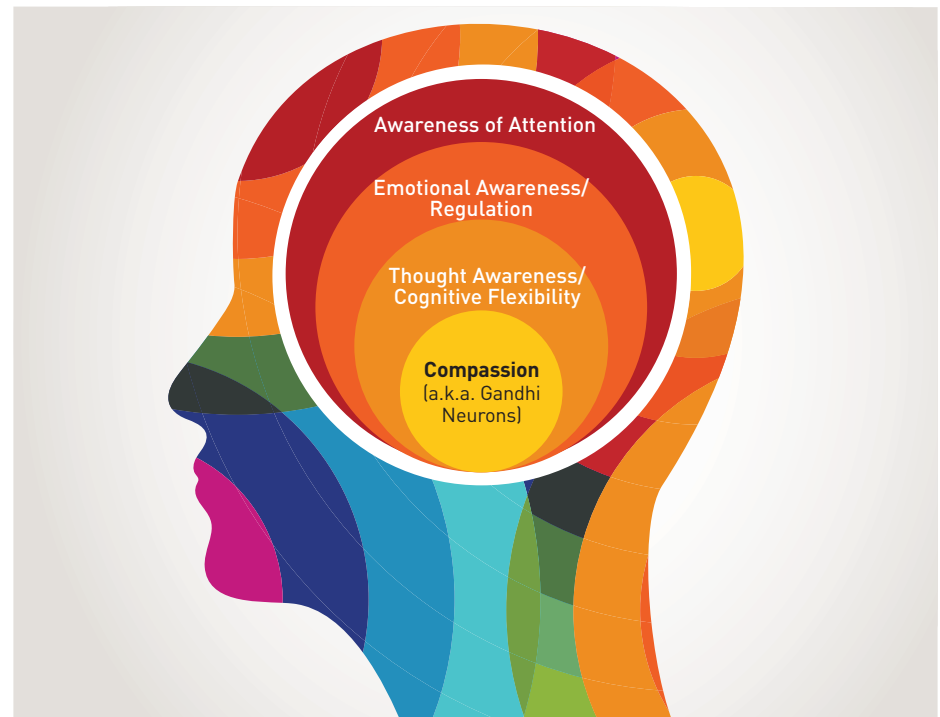
Through mindful compassion cultivation, it may be possible to prevent violent extremism through education

- ② a sympathetic concern related to being emotionally moved by suffering (affective component or often referred to as empathy)
- ③ a wish to see the relief of that suffering (intentional component)
- ④ a responsiveness or readiness to help relieve that suffering (action component)⁸

Compassion cultivation is also known to reduce implicit bias, stereotype threat

and racial bias⁹. Through mindful compassion cultivation, it may be possible to prevent violent extremism through education. In the very least, we can anticipate the likelihood that our students will be able to 'pay attention', become aware of how their emotions are influencing decisions, discern who they are in relation to their thoughts and beliefs and become more aware of where they can intentionally choose to act with kindness towards others.

STEPS TOWARDS CULTIVATING MINDFUL COMPASSION IN AN ATTEMPT TO PREVENT VIOLENT EXTREMISM



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Ines Kudo is a Senior Education Specialist at the World Bank, based in Peru. With a Masters Degree in International Education Policy from Harvard University, she joined the Bank in 2002 in Washington DC, to work on decentralised education financing and governance in East Asia and Latin America, secondary education and social service delivery in conflict-ridden countries.

Leading the Bank's Education program in Peru since 2008, Ms. Kudo has provided technical assistance to the Ministry of Education, the Ministry of Finance and regional governments, the National Education Council and the National System for the Evaluation, Accreditation and Certification of Education Quality (SINEACE).

A psychologist by training, Ms. Kudo is one of World Bank's experts on socio-emotional education and school climate.

Teaching (with) empathy and compassion in schools

 **Ines Kudo and Joan Hartley**



Joan Hartley holds a Licentiate in Clinical Psychology from the Pontificia Universidad

Católica del Perú (PUCP) and an MSc. in Psychoanalytic Developmental Psychology by University College London and The Anna Freud Center.

Ms. Hartley is a specialist in child and adolescent development and in Social and Emotional Learning (SEL) and has 18 years of experience as a teacher and trainer in several institutions.

Additionally, Ms. Hartley is an International consultant to the World Bank and former coordinator and current trainer of the Social and Emotional Learning (SEL) Programme "Paso a Paso" of the World Bank.

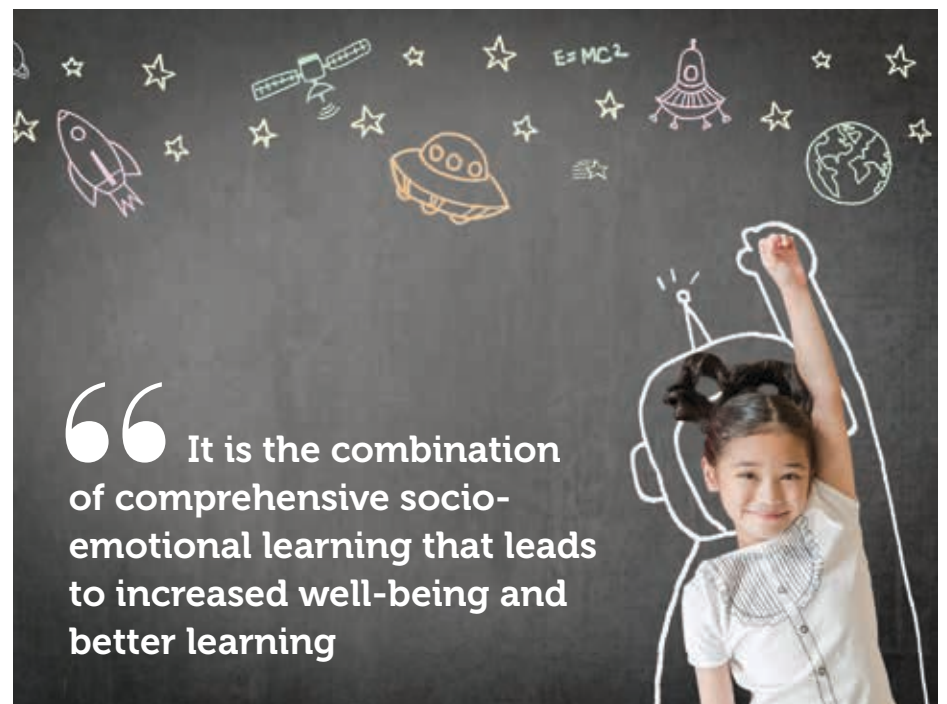
Social and emotional skills (SES) are essential to a well-rounded education. They increase academic outcomes and well-being, and need to be taught explicitly through a well-designed curriculum with well-sequenced and focused activities.

Emotions are the DNA of human experience. Social relationships play a pivotal role in helping us become fully human. Connectedness is an essential need for our species. So, we tend to assume it comes naturally and, thus, needs not to be taught in schools.

It is only recently that policymakers and organisations are paying attention and defining emotions and social skills as essential to a well-rounded education. This is mostly based on growing evidence that socio-emotional skills increase academic outcomes and well-being and employers seek those skills and will pay for them.

There is also enough scientific evidence suggesting that social and emotional skills

(SES) can be taught in schools through a combination of approaches. This evidence finds that for better results, especially with at risk children and youth, SES need to be taught explicitly, through a well-designed curriculum with well-sequenced and focused activities. What and how much goes in it varies across programmes. Focusing on a few skills with proven impact may be more cost-effective and easier to implement and assess than teaching a broader set of skills. However, in our view, it is the combination of comprehensive socio-emotional learning that leads to increased well-being and better learning. To illustrate our point, let us take two skills that could be seen as the two sides of the “getting along – getting ahead” coin: grit and empathy.



“It is the combination of comprehensive socio-emotional learning that leads to increased well-being and better learning



STEP BY STEP TOWARDS POSITIVE EDUCATION

Ines Kudo and Joan Hartley developed the Socio-emotional Learning Toolkit entitled “Step by Step”, originally designed for Peru but now available, through The World Bank, in Spanish and English for client countries around the world.

Grit

(perseverance and passion for long term goals)

Grit may serve you well to graduate from high-school, get into a good college and make a good living. Yet, many have ‘grit’ and are successful workwise, however feel unhappy and lonely. So, while teaching stand-alone grit to children is effective on certain dimensions, also teaching them self-awareness, will help them recognise what actually makes them happy. It will also help them recognise their strengths and interests, so that they pursue the goal that is best for them and so they know when it is wise to quit or to take another road. Teaching them to understand other people’s feelings, needs and concerns will help them pursue their goals in a less self-absorbed way, relying on the synergy with others to grow together while interacting with kindness and respect. This will enable them to build and sustain positive relationships, which means they won’t be alone through a challenging

journey and when they reach their goal, they will have someone important they can share their joy with. In collective societies, this is even more relevant.

Empathy

(putting yourself in another’s place)

Empathy, on the other hand, may lead children to feel overwhelmed by others’ emotions if they don’t know how to manage their own; or guilty or powerless for not knowing what to do about it. Empathy and compassion are meaningful when children know, understand and trust themselves, as well as when they know who they are, what they have in common with others and what sets them apart. We need to teach children to be aware and in control of their impulses and emotions so that they are able to focus on how others feel without dismissing their own feelings or letting them get in the way. Only then will empathy and compassion build true connectedness. Teaching empathy requires also helping students understand and acknowledge the discrimination, condescension or oppression –open or hidden, macro or micro– that other people and groups experience day to day due to their gender, age, ethnicity, faith, socio-

We need to teach children to be aware and in control of their impulses and emotions so that they are able to focus on how others feel without dismissing their own feelings or letting them get in the way.



More and better learning experiences occur in positive school environments. . . Ultimately, the goal is for children to be happier, kinder, healthier.

economic condition, sexual orientation, etc. This is a lens that sharpens empathy and needs to be trained time and again because it tends to wear off. Empathy is a first step towards teaching children to care for those in need. So a broader skill set will help them think critically about the conditions that perpetuate injustice; think creatively about what they can do, today or in the future, to change those conditions; make a realistic plan that informs their choices and inspires their personal journey, short and long-term; and pursue those goals with resolve and purpose.

Having said all that, we would like to offer two thoughts on how we think socio-emotional education and specifically education for empathy and compassion, must be put in practice.

1 Care and respect as the “air we breathe”

Research shows that in addition to explicit SES instruction, socio-emotional learning must also be integrated into regular subjects, teachers’ instructional practices, and school organisations, climate and norms. More and better learning experiences occur in positive school environments. Teachers and school leaders must align their practices, activities,

interactions and disciplinary methods, so that care and respect are established as the “air we breathe” within the classroom and the school. But, how? Being aware and respectful of feelings, owning their mistakes and using them to learn, being kind to children and adults alike, actively listening to their students, showing appreciation, nurturing uniqueness, recognising their students’ strengths and building their learning experience from there. It takes practice, self-reflection and constant feedback: schools need to measure “air quality” permanently.

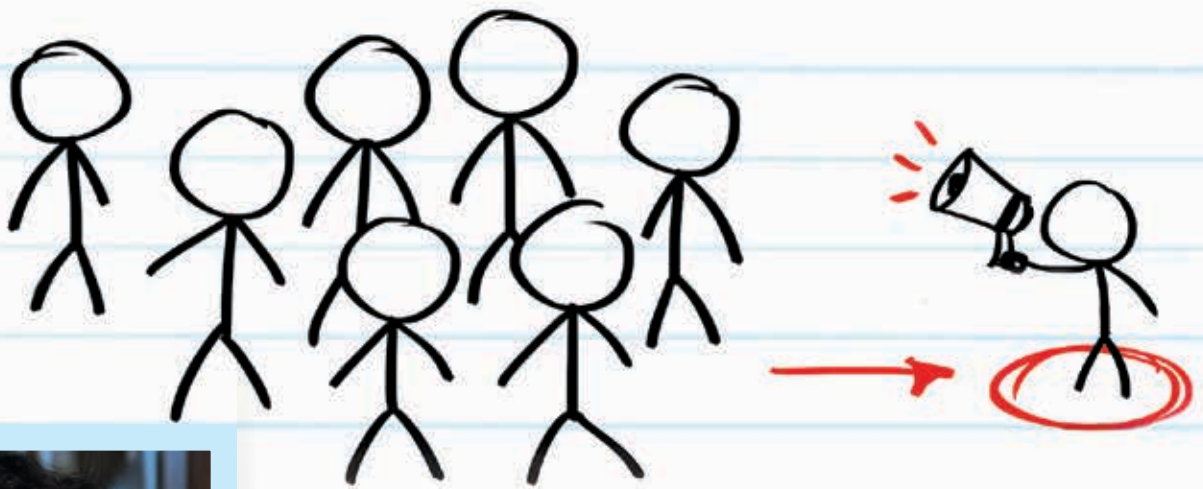
2 Teach the child, not the skill

Similar to “treat the patient, not the disease”, what this means is that children must be seen as individuals with minds of their own, entitled to opinions, emotions, concerns and preferences; and not as “adults in the making”, “work in progress”, projects of future workers, future citizens, or future parents. Then, what will matter is how they view and experience their own learning, enough so that it shapes and drives the education process to provide children with learning opportunities that fulfill their childhood needs. Experiences that spark their natural curiosity, inspire their efforts, grip their concentration, endow them with the joy of mastery, give them purpose, build their confidence, drive them to collaborate, connect them with others and with the world.

Ultimately, the goal is for children to be happier, kinder, healthier. This is not to say that who they become in the future does not matter. A child treated kindly, will become a kind adult. It is the natural consequence, but when it becomes the goal, the focus is no longer the child, the person in front of you, but the skill and the future adult. It is about teaching children with empathy and it is the most powerful avenue for building their sense of worth, belonging and purpose.



“Teachers must align their practices, interactions . . . so that **care and respect** are established as the **“air we breathe”**”



Dr. Shelja Sen has over 25 years of experience in the field of child & adolescent mental health. Dr. Sen has co-founded Children First, an institute for child & adolescent mental health that aims at providing clinical and developmental services, school mental health programmes, community outreach and research work.

Her work includes family therapy, neurodevelopmental and psycho-educational assessments and trainings. This has led her to work extensively in the area of building richer narratives for children in schools through teacher trainings, parenting workshops and interactive work with children. She is also a trainer in Solution Focused Brief Therapy (SFBT), Narrative Therapy and ADHD and has trained in different socio-cultural contexts across India and UK. She is the author of the bestselling book, *All You Need is Love, The Art of Mindful Parenting* (Harper Collins). Her second book, *Imagine, No Child Left Invisible* (Harper Collins), will be launched in September 2017.

“It Takes a Child to Raise a Village”

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 **Dr. Shelja Sen**

“ Our children are active changemakers who can help us grow up and become a more conscious, aware and mindful society.

The original African proverb might have been “*It takes a village to raise a child*” but the reverse is equally true. Why do we think that children are just the passive recipients of our goodwill and effort?

If you think about it, children feel much more strongly about their world. It could be about protecting their environment, becoming sustainable, preserving our wildlife or tackling problems such as poverty, corruption,

communalism and terrorism – issues that we are struggling with as a human race. They question, they challenge, they shake us out of our lethargic stupor that we have let ourselves slip into. Their inborn sense of justice, fairness and forthrightness makes them right and natural agents for change.

An essential part of our children’s learning in schools needs to be on co-creating leadership skills in every child that can equip them to be changemakers for a better world.

An essential part of our children's learning in schools needs to be on co-creating leadership skills in every child that can equip them to be changemakers for a better world.

Nurturing Mindful and Ethical Leaders

“One thread that I have seen in all flourishing classrooms is building strong ethical leaders. Leaders that hold on to a culture of character, courage, compassion, critical thinking and collaboration. This is what I would call the “hidden curriculum” of every classroom.

This is what builds life skills and not the subjects that we teach. I believe and dream of the day when it becomes the central part of what our education stands for at the whole school, whole state, whole nation level. However, till then, we have to limit this revolution to smaller spaces of our classrooms.

Compassion

I believe compassion and empathy are central to who we are as a human race and these qualities are therefore our only chance of survival. Children who grow up in an environment where kindness and compassion are valued, recognised and celebrated end up internalising these qualities naturally. They are empathetic, connect to others easily and build stronger relationships. We all know about how EQ—emotional quotient (concept pioneered by Daniel Goleman) is a higher indicator of a strong and successful life than the obsolete concept of IQ (intelligence quotient). Then why is it that despite all the evidence against the misplaced concept of “survival of the fittest”, we still promote it in our schools?

After their education is over and they start working, children realise that they have to do some major unlearning and relearning as more and more successful organisations across the world are about teamwork, collaboration, empathic leadership and building stronger relationships.

Character

According to the cultural historian, Warren Susman, as a culture we have made a shift to Culture of Personality from Culture of Character. When I say personality, I do not mean in the way psychologists use it but more as a focus on the outer gloss than inner core. We admire shine over substance, gloss and glitter over depth. We want our children to be “cool”, popular, polished, smart, charming, charismatic, eloquent, sassy and socially impressive. Qualities such as being kind, compassionate, honest, empathetic, fair, respecting human dignity and having integrity are not seen as being ‘cool enough’. Everywhere we look, there are magazine articles, blogs and books on “personality development”. That is the reason there is mushrooming of so many personality development, self improvement or even worse personality transformation

Nurturing Leaders through 5C's





Leaders and
changemakers
tend to take the path
"less trodden"

classes for children, which promise how they will make your child shine, impress, communicate effectively and have a successful life.

Personality development is about working on the outer sheen whereas developing character is about digging deep and building the core ethics.

Personality focus is about "what do others think about me?" and making a social impression whereas character is about developing a stronger inner wisdom and listening to it in the most difficult situations.

“ Personality is who we are and what we do when everybody is watching. Character is who we are and what we do when nobody is watching.

Unknown

Courage

Leaders and changemakers tend to take the path "less trodden". They question, they challenge the norms, the givens, the shoulds, the taken for granted, the musts, the established, the so called common sense and typically prescribed ways of life. They have the courage to think differently. They have the courage to stand up against bullying, patriarchy, abusive and ineffective practices. Changemakers stand up for what they believe in. They get knocked down, they face defeat and failure but they have the audacity to become strong and start again.

As parents and teachers we need to recognise and nurture these qualities in our children. Of course it is much easier to have children who toe the line, are obedient and compliant and it is inconvenient to have children who are ready to challenge our authority. But then we are not really building changemakers, we are just replicating clones who might not leave much of a mark.

“ Creating learning classrooms and encouraging changemakers is a disruptive process. It questions the taken-for-granted knowledge and the givens.

Critical Thinking

In the present world of congested information, we need to focus on developing children's critical thinking. Children come into this world full of wonder. They question everything as they are wired to do so. They make sense of their world through questions. However, as adults, we do not like questions much as they tax our thinking. I remember when my kids were young, their questions would have me crawling up the wall.



Curiosity is the necessary spark for learning. Every child carries that light but somehow it gets overlooked, pushed aside or dimmed out . . . The brain lights up when it is curious – it starts humming, buzzing and looking for answers. It is rarely satisfied till it has found answers

“Why do we go to schools?”, “Why do I need to eat vegetables?”, “How do we have babies?”

Curiosity is the necessary spark for learning. Every child carries that light but somehow it gets overlooked, pushed aside or dimmed out.

I love the way John Dewey, one of the most influential minds in the area of education talks about teachers and churning curiosity: “His task is rather to keep alive the sacred spark of wonder and to fan the flame that already glows. His problem is to protect the spirit of inquiry, to keep it from becoming blasé from overexcitement, wooden from routine, fossilised through dogmatic instruction, or dissipated by random exercise upon trivial things.”

The brain lights up when it is curious – it starts humming, buzzing and looking for answers. It is rarely satisfied till it has found answers. We also know another thing about the brain – the more it lights up, makes synaptic connections and builds pathway, the more complex and stronger it grows. Especially the pre-frontal cortex or the conductor of the whole neural orchestra, which seats what we call the executive skills – ability to think clearly, self regulate, manage time, organise self, be goal directed. In short – the key ingredients for optimal living.

Collaboration

One aspect common in all successful and healthy organisations across the world, which believe in the well known concept pioneered by Jim Collins (authored the book by the same name) is “Good to Great” which emphasises the spirit of collaboration. There is enough evidence to indicate that teamwork, working in partnership and cooperatively makes any organisation “good to great”. All strong leaders recognise and work tirelessly towards collaboration. In fact, the mark of a good leader is how much of resonance they are able to create in their teams.

Therefore, it stands to reason that we should build these skills in children from an early age. However, education becomes a lot about putting one against the other. A child starts measuring his or her worth in terms of how much better or worse he or she is doing compared to others.

Collaboration is a mindset, an approach and a spirit. Where each child’s assets, affinities and temperament are understood individually but the focus is on team spirit, building synergy and bringing out the best in each other. Far cry from Hunger Games practices in our school.

Excerpts from Dr. Shelja Sen’s book ‘Imagine, No Child Left Invisible’ to be published in September, 2017 by Harper Collins.

Collaboration is a mindset, an approach and a spirit. . . where the focus is on team spirit, building synergy and bringing out the best in each other.





Maria Vamvalis is an educator, curriculum developer, educational consultant and Ph.D. student, who has focused her work on nurturing transformative citizenship education methodologies for the benefit of the local and global commons. Maria has taught within the formal and non-formal education system in Canada and has also worked in the global development sector. She currently facilitates and coordinates professional learning for the Critical Thinking Consortium, a not-for-profit organisation based in Canada focused on explicitly teaching the tools of critical, collaborative and creative thinking both nationally and internationally.

How Should We Respond to Our Changing Earth?

ENGAGING STUDENTS IN CRITICAL INQUIRY
FOR GLOBAL ENVIRONMENTAL CITIZENSHIP

 **Maria Vamvalis**

Engaging our students in meaningful explorations of core environmental issues is a fundamental mandate of our times. How might we frame curricular expectations and learning goals where students are invited to think deeply and meaningfully about relevant planetary issues and disciplinary concerns that supports the development of active, global citizenship?

As an educator in Toronto, Ontario, Canada with a passion for nurturing global perspectives and responsibility grounded in local actions, I have spent the last two decades thinking deeply about the best ways to create transformative moments of teaching and learning in both formal and informal educational contexts.

“Relating the climate change crisis to my personal life was memorable because it helped me see how climate change is impacting my life. It made me think really hard about my daily actions and routines and how I must make a difference on this issue.”

Grade 7 student

Central to the process of engaging in transformative teaching and learning is the ability to foster deep understandings that prompt a shift in thinking and being. Uncovering bias, allowing our current worldview to be disrupted and facing



“ Sometimes learning about the realities of the global environmental crisis made me feel very scared. At some points, I felt like crying. At other times, when I saw the most inspiring and sustainable responses, I couldn't help but smile and feel motivated.

Grade 7 student

complexity and seeming intractability can be deeply uncomfortable processes. Yet how do we best hold the tension of ambiguity in the work of social change and confront complexity together?

The stance educators and programme leaders employ is so fundamental to the kinds of understandings and competencies that will ultimately be furthered through a learning process. What are the approaches that emerge in these times as most supportive to a stance of nurturing shift in thinking and being? What key frameworks and tools can we employ in our work as educators to facilitate meaningful social change that transcends transmissive and unconscious initiations into a dominant worldview but instead support independent thought and the careful consideration of multiple perspectives?

One of the key challenges that must be addressed as educators resides in how to both spark curiosity, wonder and passion for learning, yet also explicitly teach students the necessary tools of quality thinking as they engage in meaningful inquiries into relevant issues and explorations.

“ This project isn't just about the final grade. It's about becoming a better and more thoughtful learner as well as becoming someone who can really make a change for the better.

Grade 7 students

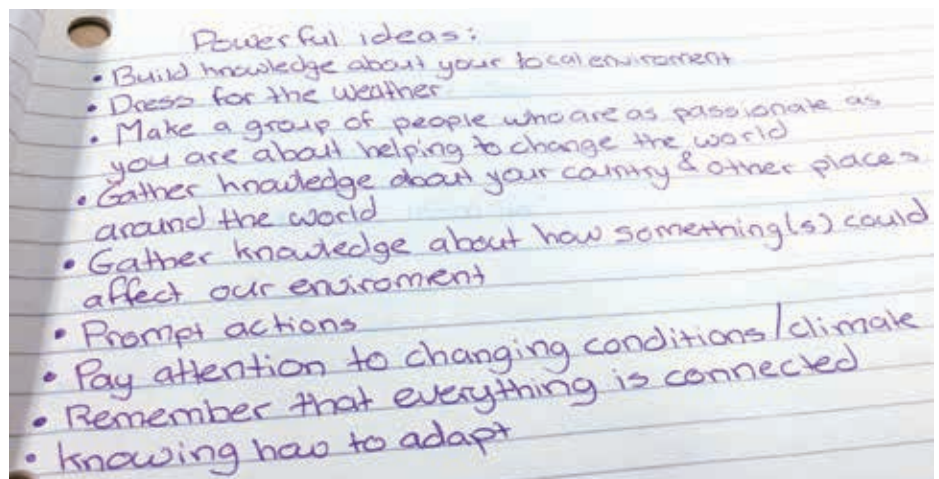
What are the key intellectual tools necessary to engage in a consequential inquiry and how can educators support the development of these core thinking competencies? How do we help students make the best decisions, use credible evidence to support and justify their choices and develop key thinking dispositions such as perseverance, empathy and open mindedness?

In my work as an educator for almost two decades, I have found that one of the most powerful frameworks teachers can employ to support the development of quality thinkers has been carefully developed through the Critical Thinking Consortium (www.tc2.ca), a Canadian not-for-profit organisation that has been in existence for almost three decades.

↓ Students engaged with creating compelling 'messages to the world' that communicate powerful ideas that will help us to respond sustainably to our changing Earth.



One of the key challenges that must be addressed as educators resides in how to spark curiosity, wonder and passion for learning



Five key intellectual tools that invites deeper thinking



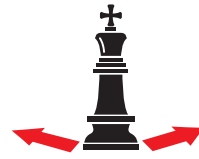
Background knowledge



Criteria for judgement



Thinking vocabulary



Thinking strategies



Habits of mind

“ I have learned how to use evidence and accurate facts to support my conclusions, which strengthened my arguments for taking action on the environment. I felt that my thinking became deeper and I started to make important connections between ideas.

Grade 7 student

Through ongoing reflection, conversation and refinement, the organisation has identified the five key intellectual tools that are always in operation whenever we are engaged in a problematic situation that invites deeper thinking:

- 1 **background knowledge**
(the key disciplinary concepts, knowledge and big ideas),
- 2 **criteria for judgment**
(supporting sound decision making by using criteria as the means through which we will make our decisions),
- 3 **critical thinking vocabulary**
(concepts such as bias, justification, reasoning and evidence),
- 4 **thinking strategies**
(the thousands of heuristic tools and devices we use to help us decide, such as a Venn diagram, rating scale or pro-con chart)

5 **habits of mind**

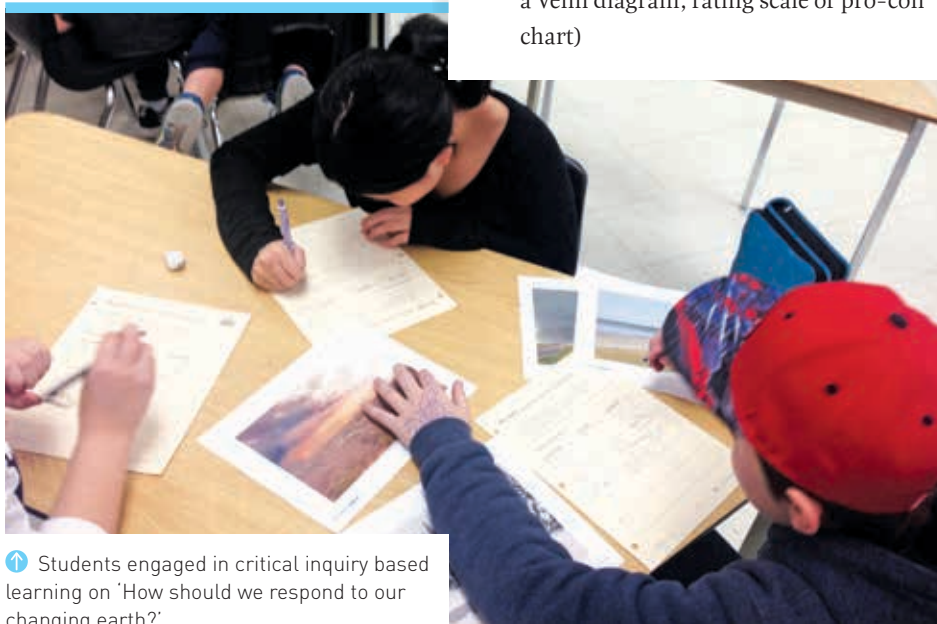
(the key thinking dispositions that support sound decision making such as the ability to consider diverse perspectives, paying attention to detail and being flexible in our thinking).

Shifting from a traditional stance of teaching content and then perhaps having a chance to thinking about that content to a stance where think is the methodology through which we engage in the learning process supports the development of student ability to think critically and deeply about global issues and concepts. The focus then shifts to developing reasoned judgments by using the intellectual tools needed for quality thinking.

While there are diverse approaches to inquiry-based learning, including discovery-based inquiry, curiosity-fueled inquiry and research-based inquiry, focusing on an approach that emphasises critical inquiry sustains student learning by scaffolding the key thinking tools students need to engage in an inquiry-based challenge. In the critical inquiry based unit that the students quoted in this piece engaged with, the critical challenge was to create a compelling ‘message to the world’ that communicates powerful ideas and inspiring examples that will help us to respond sustainably to our changing Earth.

Students engaged in two different lines of inquiry: one that asked,

What can we learn from effective responses to the natural environment?, while the second had students consider, **Which sustainable responses inspire us to take action?”**



↑ Students engaged in critical inquiry based learning on ‘How should we respond to our changing earth?’



The students were required to engage in the overarching inquiry challenge, **“How should we respond to our changing Earth?”**

It was awe-inspiring to see student capacities for thoughtful engagement with important environmental issues . . .

“ I have developed new skills through this process, one of which is to actually now notice the environment and the problems facing my community and our world. I have gained knowledge on a lot of environmental issues and I learned a lot about how we can change things and what we are actually doing to water, landforms, climate and vegetation patterns. I now know how to find credible geographic evidence and use that to send a strong message to people about the importance of taking action today.

Grade 7 student

The thinking students did throughout the unit allowed them to consider their challenge on an ongoing, iterative basis. Throughout the inquiry process, students gathered information, deepened their understanding, revisited initial ideas and shared their evolving thinking through conversations, class discussions, lesson responses and reflections in their personal ‘Thoughtbooks’ (a space where students could track their evolving thinking about the overarching inquiry questions). This supported a more robust understanding of core geographic and environmental concepts within an authentic context.

A stance of critically inquiring into a real-world set of problematic situations

and issues allowed me to explicitly nurture the development of the critical, creative and collaborative thinking tools that students required to engage in the overarching inquiry challenge, *How should we respond to our changing Earth?* It was awe-inspiring to see student capacities for thoughtful engagement with important environmental issues grow and develop in unexpected and meaningful ways. Every single student, at the end of the unit, stated that they now felt a responsibility to take on climate change in their respective communities.

A video about the experience was made and can be viewed at:

<https://vimeo.com/206659956>



@ kcommons.org



AMA's are free flowing conversations on Knowledge Commons (KC) between an invited guest and the users. We encourage experts from different walks of life to share with us their journeys, learnings, their work and their lives. We set aside an hour for this session and the users are free to raise a question of their choice. The personal insights shared by the experts give us a rare glimpse of their knowledge and experience.

The following AMA sessions were conducted between several experts on the subjects of mindfulness, empathy, compassion and intercultural dialogue and users who wanted to understand how these competencies can be embedded into informal, non-formal and formal learning systems to foster peaceful and sustainable societies.



Dr. Marilee Bresciani Ludvik
Professor of Postsecondary Educational Leadership, San Diego State University



Chade-Meng Tan
Chairman - Search Inside Yourself Leadership Institute, Google Pioneer



Dr. Richard Davidson
Founder, Centre for Healthy Minds, University of Wisconsin-Madison



Dr. Philippe Goldin
Associate Professor, Betty Irene Moore School of Nursing, UC Davis



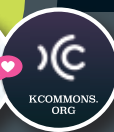
Dr. Steve Hickman
Founder, Centre of Mindfulness at UCSD



Dr. Rick Hanson
Psychologist & New York Times best-selling author



Rafael Tyszblat
Manager, Innovation & Programme Design, Soliya



ASK ME ANYTHING

EXCERPTS FROM DR. MARILEE BRESCIANI LUDVIK'S DISCUSSION ON AMA



Dr. Marilee Bresciani Ludvik

is the Professor of Postsecondary Educational Leadership at San Diego State University and Senior Research Fellow at UNESCO MGIEP. Marilee works on integrating mindfulness-based and compassion cultivation practices into curriculum to foster global citizenship.

“Some research states that our minds wander 47% of the time... the practice of mindfulness allows us to notice when our mind is wandering and then gently kindly invite it back to where we would like to place our attention.

Sana

What has been your one big learning ever since you started focusing on emotional regulation in students?

Marilee

My biggest learning is that we can actually reduce implicit bias by practicing mindful compassion. That is such a joy and motivation for us to share these practices.

Sana

Are human beings compassionate by nature?

Marilee

What we understand to date is that human beings innately seek social connections. We also understand that human beings innately connect to those who they see as within their in-group and with whom they are not competing. What is interesting about what we are recently discovering is that one may have to explicitly cultivate a feeling for and an offering of kindness to those who one sees as in the out-group or with those you are competing against.

Akriti

Interesting, and how is it that one can work on cultivating a feeling for those we consider in the out-group?

Marilee

with “just like me” exercises and loving kindness!

Mareike

Is there an (online) publication with recommended “just like me” exercises?

Marilee

Search Inside Yourself by Meng or you can access the practice for free at www.integrativeinquiry.org

Adithya

Could you expand on the current research on the role of affect in learning, both inside and outside a classroom setting? While one aspect of this question is related to stress and attending negative impact on attention and learning, I would also like to know more about the positive role played by emotion in reinforcing cognitive processes related to attending to new information.

Marilee

Hi Adithya, in short, we understand that emotions play a role in regulating what gets stored and recalled from memory and emotions play a role in decision-making and prioritising of decisions. There are many other factors at play in reinforcing cognitive processes such as reflection and sleep. :)

Akriti

Can you please tell us a little more about the curriculum you're designing that integrates compassion cultivation and mindfulness? Based on your research, what has been the effectiveness of imparting these competencies through formal learning systems?

Marilee

Yes, the work we are doing at UNESCO MGIEP seeks to integrate mindful compassion practices based on research from mindfulness-based stress reduction (MBSR), compassion cultivation training (CCARE CCT), Search Inside Yourself Leadership Institute (SIYLI), and Mindful Schools. These simple, but not easy practices have shown to significantly reduce stress and anxiety, improve overall well-being, and increase compassion (measure in 4 parts/ Hooria Jazaieri's work). In addition, on some occasions, we have seen increased kindness in communication as well as increased creativity and problem solving abilities.

Nandini

Its fascinating to know that that you are working towards integrating mindfulness and compassion in curricula - this means these can be taught? What has been your experience about teaching them and how do you think we will measure such learning?

Marilee

Yes, at UNESCO-MGIEP, we have curriculum for college students - called Campus Ambassadors and curriculum for grades 6-12 - called LIBRE - which we are launching soon. And it is more accurate to say that what we are doing is setting up the conditions for the student to experience and experiment with these practices while being guided by a trained “coach” of these practices. We evaluate the effectiveness with standardised pre and post- assessment instruments, as well as through an evaluation of effective journaling and observation (if we have access to that).

Read more at <https://goo.gl/mVtYEX>

ASK ME ANYTHING

EXCERPTS FROM CHADE-MENG TAN'S DISCUSSION ON AMA

Sana

It is an absolute pleasure to have you for this AMA. I would like to start the discussion by asking you to briefly describe a course on mindfulness, what does it look like in practice.

Chade-Meng

Mindfulness can be defined as "moment-to-moment non-judging attention." It is essentially a specific way of paying attention, and it's something that we all already innately know how to do. So part of the training is not to teach people how to do something new, but to help them do something they already know how to do better.

For that reason, a course on mindfulness can be very short, as short as 10 or 15 minutes.

The courses I teach tend to use mindfulness as a tool for something else. In *Search Inside Yourself*, I teach how to use mindfulness to cultivate Emotional Intelligence and in *Joy on Demand*, I teach how to use mindfulness as a tool to create joy in daily life.

Devesh

In an article written by you, you say that the first step to settle your mind is anchoring. I would like to know the reasoning for this activity. Bringing gentle attention to a chosen object is an activity I am easily bored of and find it really silly. I can't concentrate on one thing, till there is a need (like when I am coding!)

Chade-Meng

Anchoring is 1 of 3 ways to settle the mind. If anchoring doesn't work for you, there are 2 other ways. One is resting: simply rest the mind on the breath. And I know for certain resting is not silly because we all do it at least once a day when we go to sleep. Another way to settle the mind is being: simply just be.

Marilee

Please share with us your vision for creating the conditions for world peace.

Chade-Meng

I think there are 2 conditions for world peace, each necessary and insufficient, but combined, I think they are necessary and sufficient.

The first is what I call Global Enlightenment, which I define as: inner peace, inner joy and compassion worldwide. About half of my work (for example, *Search Inside Yourself*) is about creating this condition.

The second condition is what I call Global Action, which I define as: the whole world working together to solve three problems, poverty, injustice and environmental destruction. About half my work is about creating this condition, the main project being One Billion Acts of Peace (we're at 22 million acts of peace last I checked, and my team has been nominated 8 times for the Nobel Peace Prize).

I think that together, these are necessary and sufficient conditions for world peace.

Nandini

What are your thoughts on gratitude vis-a-vis compassion. As a neuroscientist I am aware that gratitude shares areas of the brain with compassion. Would you think gratitude leads to an increase in compassion.

Chade-Meng

I think so, but it's fairly nuanced.

First, I think compassion has a very close relationship with inner joy. If you have a lot of inner joy (the type of joy that comes from the inside that doesn't need to be fed by sensual desire or ego stroking), then you also have a lot of capacity for compassion. And if you are compassionate, you also have a lot of capacity for inner joy. So inner joy and compassion build on each other. Which is why you find a lot of the greatest people on earth (e.g., Desmond Tutu and the Dalai Lama) have BOTH qualities in abundance.

I think gratitude is a catalyst in that process. When you have inner joy, you also stop taking a lot of things for granted and then you become more grateful and when you're grateful, you have even more inner joy. And in compassion, the more grateful you are of other people, the more compassion you have for them and vice versa. So gratitude is a very powerful catalyst for both inner joy and compassion to the extent that I can't imagine gratitude not being part of the process.



Chade-Meng Tan

is the Chairman of Search Inside Yourself Leadership Institute, Google Pioneer, an award-winning engineer, international best-selling author, thought leader and philanthropist. He also Co-chairs One Billion Acts of Peace, which has been nominated eight times for the Nobel Peace Prize!

“Physical fitness is a state of body, AND it is something that can be trained. Similarly, happiness is a state of mind, AND it is a skill that can be taught.

Read more at <https://goo.gl/qefg3J>

ASK ME ANYTHING

EXCERPTS FROM DR. RICHARD DAVIDSON'S DISCUSSION ON AMA



Dr. Richard Davidson

is founder, Centre for Healthy Minds at Waisman Centre, University of Wisconsin-Madison. His research is focused on the neural bases of emotion and methods to promote human flourishing including meditation and related contemplative practices. He has been a member of the Mind and Life Institute's Board of Directors since 1991. He was named one of the 100 most influential people in the world by Time Magazine in 2006.

“The Dalai Lama is very much a public intellectual and has a very keen interest in science. He has publicly stated that if any tenet of Buddhism is directly contradicted by scientific fact, he is prepared to give it up!”

Sana

Dr. Davidson, what is it about a human being that you most value?

Richard

I consider the quality of innate basic goodness to be of particular value.

Anantha

Hi Dr. Davidson, you use the term human flourishing in your introduction. Now let's assume that the goal of our education systems is towards human flourishing. How would you suggest that we revise or even redesign our education systems to achieve this end?

Richard

To include human flourishing in our educational systems is really important. Taking social and emotional learning more seriously is a key factor.

Akriti

This question refers to a paper that you've authored: 'alterations on brain and immune function produced by mindfulness meditation'. Based on your research, could you please elaborate on how practicing mindfulness meditation alters the functioning of our brain?

Richard

By cultivating positive qualities of the mind different brain circuits are engaged and activated—particularly circuits important for the regulation of emotion and attention.

Anantha

UNESCO uses the term socio-emotional quite a bit. But how does one actually put this in practice? Saying it is important and telling people its importance does not cut it. Can you suggest some first steps based on your work and experiences?

Richard

This raises the important question of the difference between declarative and procedural knowledge. Declarative knowledge is knowing about things while procedural knowledge is embodied knowledge or skills learning and this latter form of learning requires practice.

MadHatter

Are there trainings to bolster empathy in humans? Are these techniques reliable enough to be introduced in schools globally?

Richard

Yes! We have developed a Kindness Curriculum that we have implemented in public schools and published a recent scientific article showing the benefits of this curriculum on various measures of prosocial behavior.

Devesh

You earlier said that you find basic goodness of humans to be of particular value. I would love to know whether the basic evilness in humans shakes your thought/trust even a bit?

Richard

No...I do not believe that "evil" is a fundamental part of human nature. If given a choice, young infants prefer warm-hearted and cooperative encounters compared with those that are "evil." It is clear that we all have the potential for destructive behavior, but this is due to ignorance and learning and is not a fundamental part of our nature I believe.

Sana

For the sake of clarity and rigour, could you please explain the term "human flourishing", the way you use it.

Richard

Human flourishing occurs when a person exhibits enduring well-being, when s/he has a sense of fundamental ok-ness, where there is a sense of harnessing the full range of human potential and where one's sense of well-being is not dependent upon external circumstances.

Marilee

You speak a great deal about the need for more rigorous research in mindfulness and compassion. How would you recommend schools evaluate the effectiveness of their mindful compassion curricula?

Richard

Ideally they should adopt curricula that have been well studied by serious scientists. They can also partner with interesting scientists in evaluating the impact of the curricula they adopt.

Read more at <https://goo.gl/Bvx7Rn>

ASK ME ANYTHING

EXCERPTS FROM DR. PHILIPPE GOLDIN'S DISCUSSION ON AMA

Sachit

Greetings Dr. Goldin, what advice would you give to someone just starting out in mindfulness meditation? Are there key texts to read or any other associated practices that make the beginner's experience better?

Philippe

It is helpful to join a course and aim to practice even a little everyday. It is not easy to start a new habit, but being part of a group can help with accountability. There are many different texts both Buddhist and scientific.

Sana

You use functional neuro imaging to see the affects of cognitive behaviour therapy, compassion cultivation training, mindfulness etc. Could you share with us some of your observations/ learning from these studies?

Philippe

On a self-report level, it appears that there may be more shared mechanisms across CBT and MSBR (mindfulness-based stress reduction) than distinct mechanisms of change. Both involve some level of exposure to one's thoughts, habits, emotions and tendencies to react in patterned ways. With regard to compassion meditation training, it is really a more advanced practice that benefits from prior mental stabilization via mindfulness and vipassana.

Philippe

On a brain level, we have very clear differences in the brain networks recruited when a person implements cognitive reappraisal, or re-interpreting thoughts and reactions, compared to decentering from immediate reactivity to one's mental experience.

Nandini

Hi Philippe - do you think everyone who is empathetic is compassionate? What really differentiates the two?

Philippe

Empathic concern for others is a building block to compassion. It is necessary but not sufficient for the development and expression of compassion. The deepest levels of compassion require insight in to the nature of reality.

Adithya

Does the training in compassion require a level of involvement/affective response from the participants for it to have an enduring change in the learner's brain outside the session? Has there been any research to this effect? We used to have compulsory meditation sessions in school, but I feel for us, as students, we were not receptive to the instructions and at least for a majority of us, the sessions seemed somewhat ineffective.

Philippe

When cultivating compassion it is NOT necessary to have a large emotional shift. Compassion is a intentional stance toward others, more of a cognitive perspective that can but does not have to have an emotional component.

Mohanani

Greetings Dr. Goldin. My questions:

- ① How would you define empathy and compassion?
- ② What is the relation between empathy and compassion?
- ③ Is empathy always a good thing, or good only when confronted with suffering?
- ④ Do mirror neurons distinguish between desirable empathy and undesirable empathy?

Philippe

Empathy entails a cognitive ability to take the perspective of the other, and a affective component that can generate a simulation of what the other might be feeling and experiencing.

Compassion, in technical terms is part of the 4 brahmaviharas, 4 superior qualities of love, compassion, equanimity and sympathetic joy. These 4 go together. Compassion is the wish that others make contact with the cause and conditions that free that person from suffering, ignorance, confusion, angst.

Empathy without wisdom and insight can be problematic. If one feels for others too much without skillful means (upaya) and insight (vipassana) this could lead to burnout. In contrast, there is no such thing as compassion fatigue or burnout as true compassion is enriching to self and others.

Philippe

answer to 4 is no



Dr. Philippe Goldin

is an Associate Professor at the Betty Irene Moore School of Nursing at UC Davis, where he teaches, conducts research and mentors students in the areas of health promotion, clinical psychology and cognitive-affective neuroscience.

“ There is currently no brain state or set of brain networks that indicate a person in a state of mindfulness. There is some interest in determining whether changes in respiration might reflect different levels of concentration. But there is no single accurate measure of mindfulness or even meditation absorption.

Read more at <https://goo.gl/W8QJ2t>



Dr. Steve Hickman

is founder and director of the University of California at San Diego Center for Mindfulness. He is a Clinical Psychologist and Associate Professor in the Psychiatry and Family & Preventive Medicine Departments.

“ I think that we do move slower with age and it gives us a kind of wisdom that allows us to more easily see our own reactivity and hold it in a different way. But on the other hand, if we start the practice early in life, it seems to stay with us and influence our later development.

ASK ME ANYTHING

EXCERPTS FROM DR. STEVE HICKMAN'S DISCUSSION ON AMA

Sana

Hello Dr Hickman, to begin the discussion, Could I ask you to please help us understand the term "mindfulness".

Steven

I like to define it as "moment-to-moment, non-judgmental, awareness".

Steven

It is an ongoing process of tapping into our ability to be present.

Steven

Mindfulness, an ancient practice and idea, is being offered today in a huge variety of settings as part of what are called "Mindfulness-Based Programmes" or MBPs (sometimes called MBIs) in which mindfulness is taught through practice in a multi-week training program to deal with stress, pain, illness, depression, anxiety and many other things.

Sachit

Greetings Dr. Hickman, I am interested in knowing why you chose this field?

Steven

I was working as a psychologist with people with chronic pain, who had few options to change or eliminate the pain, and had to find a way to live with pain in a more productive and less disruptive way. By accident, I learned about mindfulness and mindfulness-based stress reduction (MBSR) and found it to be a perfect match.

Plus I found the practice very powerful in my own life once I learned it!

Gauri

How can schools introduce mindfulness in their classroom as a daily practice? Children these days are used to instant gratification and tend to get impatient very easily.

Steven

The real key for schools to introduce mindfulness (and this is a very powerful place to introduce it) is to make sure that the teachers learn and practice it themselves! You wouldn't take swimming lessons from someone afraid to get into the pool! Teachers who are mindful then can teach mindfully and thereby teach mindfulness! Practicing teachers lead to practicing students! That's where to start.

Marilee

How might mindfulness prevent violent acts of behaviour - either in word or in action?

Steven

Hi Marilee! I see mindfulness as the space between impulse and action. In many situations we are hijacked by our lower brain systems (the "animal brain") to react to what feels like a threat by going into "fight or flight" because that has kept us alive for millennia. With mindfulness, and using the power of our human brains, we can see that reactivity arise and let it pass so that we can respond more mindfully and responsibly. This is the equivalent of taking a deep breath or counting to ten when we are angry. We allow our higher brain (the frontal lobes) to offer up more adaptive and evolved solutions to these very challenging situations.

Moumita

You earlier defined mindfulness as "moment-to-moment, non-judgmental, awareness", so how could we evolve the process of mindful learning in addressing cultural disparities?

Steven

I think that the more that we bring moment-to-moment awareness to our reactivity, our habitual reactions, our conditioned behavior, we can see where these are automatic and often inappropriate for a setting. When we watch our own reactivity, say to how a person is acting in a way that we see as inappropriate, we can notice that we are reacting and perhaps take the time to see that the person is simply acting in a way that is unfamiliar to us and not personal or hurtful to us. Mindfulness lets us see more clearly where our bias lies and perhaps overcome it more often in our encounters with cultural differences.

Read more at <https://goo.gl/r6PSdJ>

ASK ME ANYTHING

EXCERPTS FROM DR. RICK HANSON'S DISCUSSION ON AMA

Sana

Hello Dr. Hanson, I want to start the AMA with this question – what is a Buddha brain and what are some steps that we can take to achieve it?

Rick

"Buddha" originally meant "one who knows, one who sees clearly." So I mean "Buddha brain" in a general, universal sense – independent of religion or ideology – as one that sees what leads to happiness and sees what leads to suffering. This is a brain that we can all progressively develop in the two fundamental, necessary steps of learning and growth: (1) have beneficial experiences, such as compassion or resilience or happiness and then (2) convert those experiences into lasting changes in the nervous system. Then you will slowly but surely move toward a Buddha brain.

Gauri

Hi Dr. Hanson, could you give examples of how one can put the two fundamental experiences in practice? What's the ideal scenario for these two steps to show results?

Rick

The essence of the two steps is: "have it, enjoy it." Or in the saying: "Neurons that fire together, wire together."

For example, you could notice something beneficial already present in awareness, such as the natural increase in relaxation as you exhale. Or create a beneficial experience by thinking of something you are grateful for or someone you feel compassion for.

Then, in the second step, Enrich the experience by staying with it for a breath or longer while feeling it in your body, and Absorb the experience by feeling it sinking into you with a sense of what is rewarding about it.

Each time you do this, it will tend to increase the consolidation of an encoded experience into your nervous system, bit by bit, a little at a time. And gradually you will convert "state" relaxation, gratitude, compassion, etc. to "trait" relaxation, gratitude, compassion, etc.

This is the fundamental, universal process of learning, healing, growth, and transformation.

MadHatter

I do feel that I retain the negative experiences in everyday life a lot more than the positive, does this mean I am a negative person?

Rick

It means you are human like me!

You are referring to what scientists call our evolved "negativity bias." Or as I put it, we have a brain that's like Velcro for bad experiences but Teflon for good ones.

This helped our ancestors survive and enable us to be in this conversation today. But it also creates a lot of needless suffering. And it blocks learning from "good" – i.e. enjoyable, beneficial – experiences, which is the primary pathway to growing psychological resources such as confidence, determination, empathy, and commitment to the welfare of others.

So the practical takeaway for me is not to resist negative – painful, harmful experiences, but to disengage from them and stop pouring gasoline on that fire . . .

Akriti

How do you 'train your brain for happiness'? Is it possible to do this for children as well?

Rick

Basically summarised in the traditional saying that the mind takes its shape from what it repeatedly rests upon, updated now with our modern understanding of "experience-dependent neuroplasticity." So I'll focus on children here.

I work with children and have raised two of them with my wife. It is really helpful to encourage children to take an extra breath or two – or longer, even at formal occasions such as gratitude before a meal – when they are having a beneficial (and usually enjoyable) experience in order to savour it, register it in their body, and receive it into themselves.

Then they – or anyone engaged in the deliberate internalisation of beneficial experiences (which might be called neurobhavana!) – will increasingly carry the beneficial results of this internalisation with them wherever they go.

Also, children can be supported or gently encouraged to experience particular psychological resources that would be beneficial for them – such as a sense of self-worth, or compassion, or gratitude, or calming, and then develop these "key resources".



Dr. Rick Hanson

is a psychologist and New York Times best-selling author of *Hardwiring Happiness*, *Buddha's Brain*, and *Just One Thing* and a Senior Fellow of the Greater Good Science Center at UC Berkeley.

“Research shows that about half to two-thirds of the variation in psychological attributes (including well-being) – is due to non-heritable factors. This means that on average about half to two-thirds of who we are is acquired rather than innate. A great opportunity! But also therefore a great responsibility.”

Read more at <https://goo.gl/kt8qMe>

ASK ME ANYTHING

EXCERPTS FROM RAFAEL TYSZBLAT'S DISCUSSION ON AMA



Rafael Tyszblat

is the Manager at Innovation & Programme Design at Soliya, a lead implementing partner of the UN's Alliance of Civilizations initiative. He works with young people across the globe to foster in them cross-cultural understanding and cooperation through dialogue.

“ Intercultural dialogue for me is a process, ideally accompanied by a trained facilitator, that enables a constructive communication between people who belong to different cultural or identity groups, in order to learn from one another and from the interaction itself.

Sana

Hello Rafael. To start the session, could I ask you to please explain the difference between 'dialogue' and a general conversation?

Rafael

Here is the main thing about dialogue: the goal is not just to exchange ideas with people you tend to agree with, nor is it to confront your counterpart over a controversial topic. Dialogue is a process, ideally guaranteed by a trained facilitator, to enable learning out of the exchange. You try to understand what the others are saying, and especially WHY they're saying it. The goal is not to convince that you are right and that the other is wrong but to understand where each one is coming from. It's a method to transcend preconceptions and be able to relate to one another despite the fact that we all have different life experiences.

Sachit

Can you throw some light on what Soliya does and what are the advantages (or disadvantages) of using an online platform to drive something like intercultural dialogue?

Rafael

Soliya is a non profit organisation that designs and implements Virtual Exchange programs: we're enabling people to connect for real authentic and respectful live oral conversations online across lines of differences whether they be cultural, religious or political. The advantage of doing it online is that you can allow many, many more people to have this cross cultural exchange and understanding for a fraction of the cost that it would be to do it face to face!

Fathima

Hi Rafael, Could you describe the process of online dialogue? How much do you guide the process?

Rafael

Online dialogue is pretty much like face to face dialogue in terms of process. There are some stages that you need to follow to first create bonding and trust before addressing heavier, hotter topics and eventually coming to a mutual understanding - not necessarily agreeing on everything but at least understanding why we sometimes disagree. The role of the facilitator in that process is to guarantee that certain ground rules for communication are respected and to suggest questions for the group to

address. But the real actors of dialogue are the participants themselves. Facilitators should never impose anything in terms of content but should always push the participants to dig deeper on what they think and what they need to know about one another.

Yoko

Is there a possibility for "intercultural dialogue" within a "Western" culture? Does intercultural dialogue assume homogeneity of worldviews within a culture?

Rafael

On the contrary, intercultural dialogue is meant to enable groups to not feel forced to stay homogeneous! Homogeneity doesn't exist. We just pretend it does when we are facing a group that is different or antagonistic to us. That's why dialogue is different from debate. In debates, you try to represent your group and minimizes differences within your group. In dialogues, divergences within a group are normal and even valued. So dialogue within cultures should be as necessary as dialogue across cultures. It is too easy to focus on the differences with foreign groups when we have so many differences to focus on at home!

Akriti

Is there an exciting case study or an example of positive change that you wish to share with us?

Rafael

I have seen a young Yemeni guy caught between fires during the confrontation there 2 years ago and being rescued by an American group of Jews that he met during a conference and now goes around to spread the message of peace between the two religions. This is a spectacular example but there are so many others. People who get to see the humanity in a group that they have been taught to hate, go through a very emotional process of internal change.

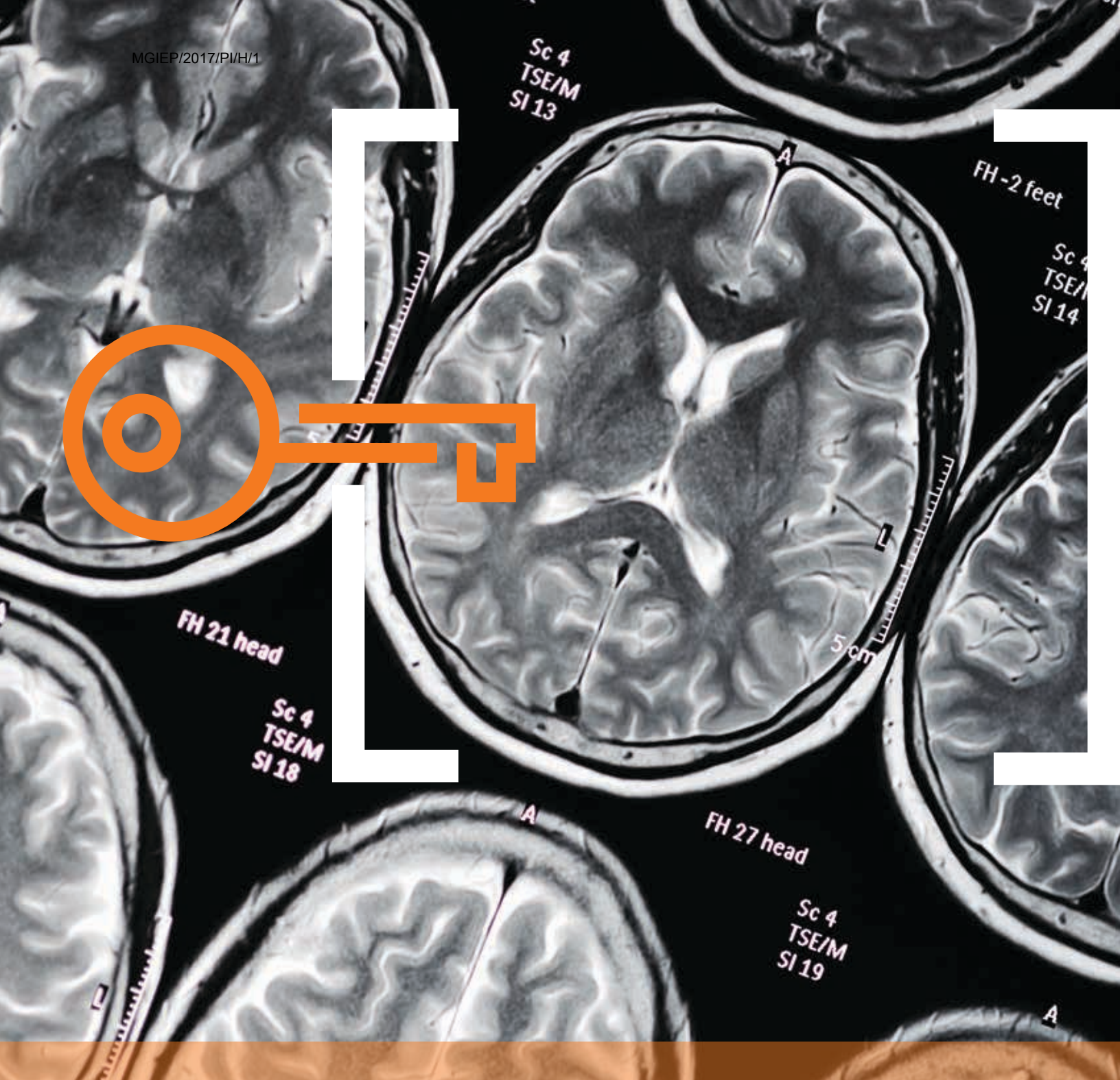
Sana

After 15 years of work in this field, how has your view of people changed? What do you now value in individuals?

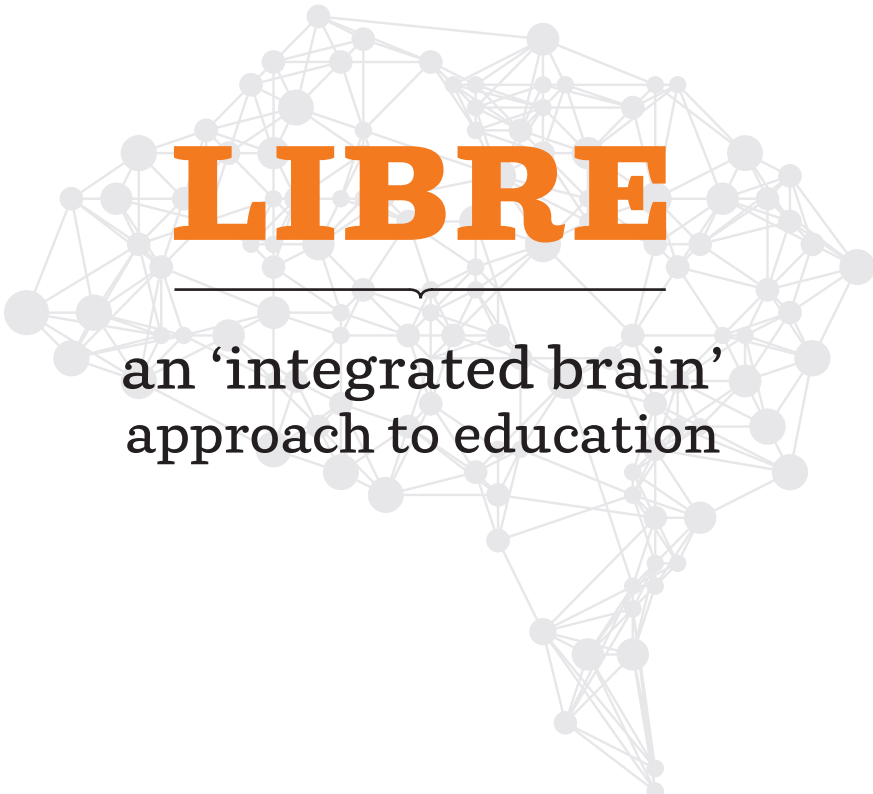
Rafael

My view of reality has changed. Reality is ALWAYS more complex than what we think. And dialogue enables me to keep enriching my knowledge of reality. And it's not going to end any time soon!

Read more at <https://goo.gl/krSrBe>



The LIBRE programme, being developed by UNESCO MGIEP focuses on employing an 'integrated brain approach to education' by inculcating competencies such as critical inquiry, mindfulness, empathy and compassion in the young in order to foster more peaceful and sustainable societies. Based on evidence from neuroscience, LIBRE will be the first curriculum designed to nourish the 'whole brain'.



LIBRE

an 'integrated brain'
approach to education

.....
 Dr. Nandini Chatterjee Singh,
 Anamika Gupta, Simon Kuany and
 Dr. Marilee Bresciani Ludvik

The year 2017 marks the seventy second year after the second world war, infamous as the deadliest war in human history, which resulted in nearly eighty-million casualties. The primary cause for this war was the absence of a common identity, namely that of humanity. Post war efforts since have focused on rebuilding economies, however, have lost sight of the primary cause for conflict, namely the lack of a common identity.

According to the Global Peace Index published in 2017, the world continues to become less peaceful and a ten-year trend in peacefulness finds that global peace has deteriorated by 2.14% since 2008¹. Although the number of interstate conflicts has decreased, internal conflicts have increased. In 2016, the economic impact of conflict was \$14.3 trillion or 12.6% of world GDP. These global challenges emphasise the mutuality of peace and

14.3 trillion or
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 of conflict in 2016

sustainability, as well as their relationship with society, economy, culture and environment. Understanding this demands a fundamental shift in our current world view which perceives reality in the form of binaries 'us' vs 'them', 'good' vs 'evil', 'black' or 'white', thus 'othering' those who are different from us. Difference not inclusion has emerged as one of the underlying factors for conflict and has emerged as the root cause of intolerance, discrimination, violence and apathy towards others and the suffering of others and has allowed for the dehumanization of those who are different from us.



“**Neuroplasticity** is defined as the ability of the brain to form and reorganise connections, especially in response to learning.

Figure 1

This lack of ability in peaceful conflict resolution may be attributed to a decline in empathy reported recently. For instance, a study conducted in college students², which examined trait or dispositional empathy found significant reduction in empathic concern and perspective taking with the decline being most pronounced in samples after 2000. There has also been concern about the reduced ‘human connect’ permeating all aspects of life due to the technology revolution and its possible consequences on how humans communicate and relate to other human beings. Electronic devices are cherished with copious amounts of attention while compassion towards fellow human beings wanes. However, human beings are neuro-biologically designed to be ‘social beings’ and the human brain - is a social brain. “Use it or lose it” is a basic tenet of both human and brain connections. In the face of technological invasion, we may stand the danger of losing empathy and compassion for human beings.

In an attempt to rescue this scenario, we draw upon recent research findings from the field of neuroscience that has revolutionised our understanding of the human brain and behaviour. The advent of functional magnetic resonance imaging (fMRI) has allowed researchers to capture changes in brain activity in real time though the data is analysed

later. Experiments using fMRI have demonstrated specialised areas in the brain for empathy and compassion and the connections between these areas^{3,4,5}. It has also demonstrated that connections between these areas can be altered because of a phenomenon called neuroplasticity (Figure 1). Neuroplasticity is defined as the ability of the brain to form and reorganise connections, especially in response to learning. This has brought to fore an important reality – the capacity of the brain to be trained.

Since training the brain begins in education curricula, we propose embedding such training in the education system. Clearly, it is not enough for education to produce individuals who can read, write, count and earn a good living. For a peaceful society, we need education that would allow learners to recognise the inherent interconnectedness and dignity of all life and instill the values of acceptance, equality, respect for diversity, empathy and compassion in us. Education that is based on this approach has the potential for triggering a powerful surge of positive transformation in the student and in society.

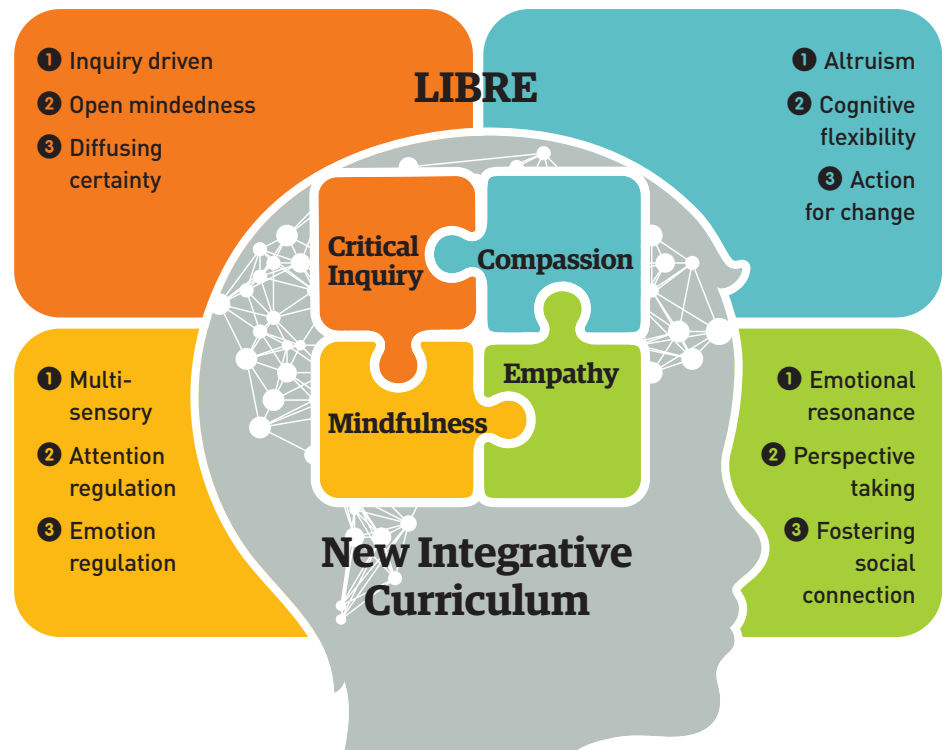
We argue for a revolution in education – one that is restructured to promote global citizenship and human flourishing rather than only catering to the narrow political or economic agenda of countries.



Human beings are neuro-biologically designed to be ‘social beings’ and the human brain - is a social brain.

“Use it or lose it” is a basic tenet of both human and brain connections.

... the LIBRE curriculum is designed to integrate the pedagogical approach of critical inquiry with mindfulness, empathy and compassion training resulting in a student-led and interactive learning experience.



We advocate the development and promotion of a new curriculum. Entitled LIBRE, this curriculum proposes a novel integrated pedagogy with a vision and mandate to build global citizens. Based on evidence from neuroscience, the LIBRE curriculum is designed to integrate the pedagogical approach of critical inquiry with mindfulness, empathy and compassion training resulting in a student-led and interactive learning experience. With roots in neurobiological design, LIBRE will be the first curriculum designed to nourish the 'whole brain'.

In the sections below, the domains of LIBRE, namely critical inquiry, mindfulness, empathy and compassion are described along with the brain circuits primarily associated with each domain. While the brain networks of learning are quite complex, the LIBRE curriculum will focus on training specific structural areas of the brain, enhancing the abilities primarily associated with those brain areas. LIBRE uses evidence based approaches, which build skills/competencies and will consciously foster what historically has been understood as intellectual thinking

with socio-emotional learning. LIBRE re-connects those with differences so that we can resolve the pressing challenges we have today, restoring peace and sustainability where it currently is challenged.

Core components of LIBRE



1 Critical Inquiry

Critical inquiry is the process of finding out about a concept, phenomena or claim, through one's own observation, experience, thinking, reasoning and judgement. Inquiry oriented learning is a pedagogical approach, which encourages learners to find answers to their inquiry either through their

With roots in neurobiological design, LIBRE will be the first curriculum designed to nourish the 'whole brain'

INQUIRY NETWORK

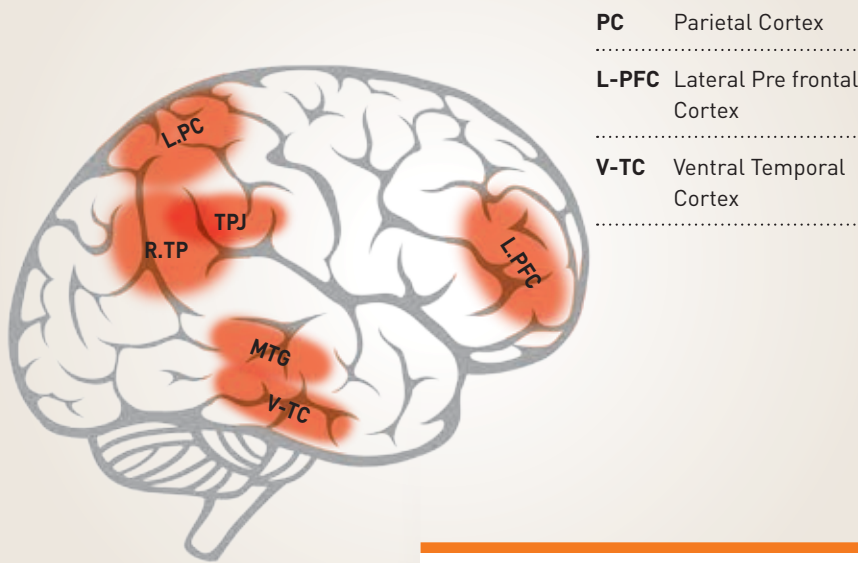


Figure 2

own or through collective observation, thinking and reasoning and based on their own judgement and experience⁶. That such skill needs to be consciously built and inculcated in students is evident from a 2016 survey conducted by Stanford University amongst 7,804 middle-schoolers in US⁷, in which a staggering 82% of the participants could not differentiate between real and fake news. A majority of the students judged the validity of the information based on how much detail was available or whether a large photo was attached, instead of weighing the source of the information. This is where the role of training in critical inquiry becomes most apparent.

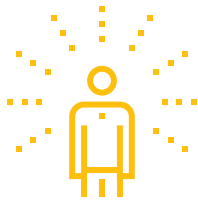
The process of inquiry involves several intricately connected parts. Initiated by the student or the teacher, it often starts with an idea triggered by curiosity, or by an intuition or speculation based

on experience, and crystallizes into a question during the process. Our objective of inculcating skills of critical inquiry will be to equip students so they are able to clearly deconstruct and reconstruct claims, definitions and concepts to arrive at conclusions that are robust, logical and humane, both independently and collectively as a classroom. Also referred to as divergent thinking, there has recently been an increase in research to emphasise its role in education⁸.

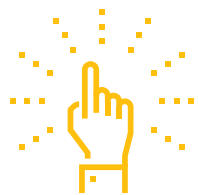
Rational inquiry is committed to accepting the conclusions that logic leads us to, even when they go against our intuitive sense. It is also committed to avoiding logical inconsistencies; asking for rational justification for the claims and conclusions presented before us; and above all, compassionately doubting and questioning ourselves, our peers, teachers and other authorities. By the end of this rigorous process, the students develop a certain degree of intellectual rigour and resilience to desist any form of indoctrination. The idea is to develop these abilities beyond narrow specialisations, cutting across disciplines such as mathematics, the sciences and the humanities. The transdisciplinary approach of critical inquiry is what makes it unique and transformative.

A meta-analysis of neuroimaging studies⁹ that have investigated the process of rational inquiry, involving moral cognition suggested an extensive network in the brain involving bilateral prefrontal cortex (ventro-medial and dorso-medial), the temporo-parietal junction (TPJ), as well as the right TP and MTG (Figure 2). Since this same meta-analysis research indicates that rational inquiry and moral cognition can involve one maintaining a distinct self and other approach to rationalising behavior, we also believe it would be extremely important to add some training that cultivates awareness of when this social disconnect is occurring when one engages in critical inquiry.

Our objective of inculcating skills of critical inquiry will be to equip students so they are able to clearly deconstruct and reconstruct claims, definitions and concepts to arrive at conclusions that are robust, logical and humane, both independently and collectively as a classroom.



Self-awareness



Sensory perception



Awareness of all within and without



2 Mindfulness

Mindfulness is the awareness that arises from paying attention to the experience of right now, non-judgmentally¹⁰. It is designed to cultivate conscious awareness of (a) where attention resides, (b) how emotions are experienced in the body, and (c) how thought, beliefs, values and emotions may influence one's ability to pay attention and regulate emotion. Mindfulness is often described as a series of exercises/practices that bring about training attention so that choices can be made about how to respond to stimuli, as opposed to reacting to it – such as experiences or people that are different from what we are accustomed to.

In LIBRE, the purpose of including mindfulness practices is to cultivate the neural networks that associate with these three objectives. Mindfulness training in the LIBRE curriculum involves a series of breathing exercises as well as other evidence-based mindfulness practices,

... the implementation of mindfulness practices in schools will lead to increases in the speed of information processing and reduced task effort

such as bringing intentional attention to everyday types of activities such as walking, brushing teeth, eating, listening, speaking, and includes a series of reflective journal prompts. In addition, students are carefully guided through exercises that invite them to explore bodily sensations associated with thoughts and feelings in order to become aware of where emotions are experienced in the body and how those experiences may relate to specific thoughts, ideas, and beliefs. The curriculum seeks to engage the students with playful curiosity, kindness and non-judgement of their inner experience.

fMRI studies on mindfulness have revealed a brain network involving both hemispheres of the brain consisting of regions in the frontal and parietal cortex, which control voluntary deployment of attention and a network that is responsible for reorienting attention that the frontal cortex primarily in the right hemisphere and temporoparietal junction (TPJ)¹¹. In addition, the emotional awareness part of mindfulness training is associated with greater activity in areas such as the anterior insula, ACC and the ventro-medial medial prefrontal cortex¹². The insula is associated with self-awareness and is linked to emotion. The ACC is also associated with emotion, but in particular with impulse control and decision-making.

We believe that the compulsory implementation of mindfulness practices in schools will ultimately lead to increased attentional awareness and reduced task effort^{13 14} along with better emotional regulation¹⁵, which may dramatically improve learning both inside and outside the classroom.

MINDFULNESS NETWORK

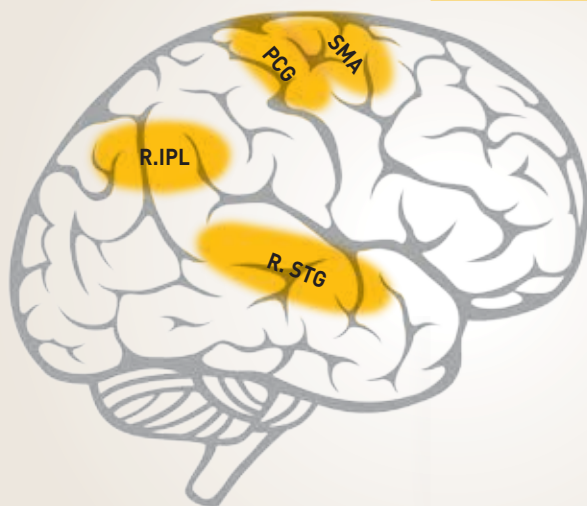
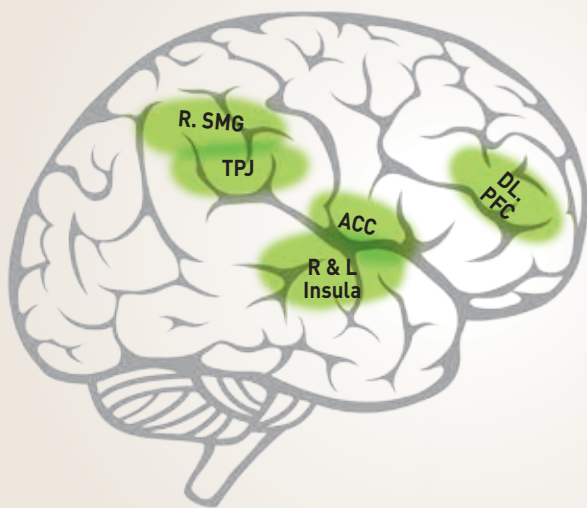


Figure 3

IPL	Inferior Parietal Lobe
STG	Superior Temporal Gyrus
PCG	Precentral Gyrus
SMA	Supplementary Motor Area

EMPATHY NETWORK



ACC	Anterior Cingulate Cortex
SMG	Supra Marginal Gyrus
TPJ	Temporo-Parietal Junction
DL. PFC	Dorsolateral Prefrontal Cortex

Figure 4



3 Empathy

Empathy is our general capacity to resonate with others' emotional states such as happiness, excitement, sorrow, or fear. Eloquently but simply explained by Matthieu Ricard 'When we meet someone who is joyful, we smile. When we witness someone in pain, we suffer in resonance with his or her suffering'. Empathy is manifested when sports fans are delirious with joy when their favourite team wins and the sorrow and anger that



Relating to
others' emotions



Cognitive
perspective taking

is demonstrated when the team loses. Despite not explicitly participating in the game or the act, the brain produces an explicit response. However, as we pointed out earlier when discussing critical inquiry, not everyone is able to share in another's experience. Nonetheless, empathy is naturally embedded in the human brain in the 'mirror neuron network'¹⁶ and forms the basis of societal structure. As discussed earlier, human beings today are decreasing in expressing empathy for human beings. Thus, explicit training in empathy, particularly for the "other" needs to have a distinct presence in the classroom.

Carefully and cautiously guided by the teacher, through discussions of personal experience and those in the classroom, the LIBRE curriculum builds empathy by guiding students through various scenarios that include similarities and differences, often encouraging students to get into the shoes of the other and thereby developing a feeling for and cognitive perspective taking of the other. Such cognitive perspective taking provides students with the opportunity to avoid emotional contagion, which can lead to empathy fatigue¹⁷.

Training in empathy comes with caution. Research has indicated that feeling for others can be turned on or off¹⁸. If turned off intentionally, violent behaviour can emerge¹⁹. It is therefore important and critical that empathy training build on a foundation of mindfulness methodology and compassion training so that it contributes to participants' altruistic and pro-social behavior to form social connections^{20 21 22}. And this is why the training of compassion must necessarily accompany training in empathy.

LIBRE curriculum builds empathy by guiding students through various scenarios that include similarities and differences, often encouraging students to get into the shoes of the other and thereby developing a feeling for and cognitive perspective taking of the other.



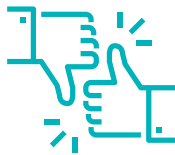
4 Compassion

Building upon mindfulness and empathy, compassion as characterised by feeling for another yet, not confusing one's self with another. Rather, one can resonate with another's emotion and remain distinct from that emotion²³. Such compassion cultivation training, adds another dimension, characterised by a desire to improve the other's wellbeing²⁴. This practice makes it possible to avoid emotional contagion, or distress when empathising with those who are suffering, while also cultivating a desire to see the other alleviated from their emotional and/or physical pain and suffering²⁵.

Compassion training increased activations in a non-overlapping brain network spanning ventral striatum, pregenual anterior cingulate cortex, and medial orbitofrontal cortex^{26 27} (Figure 5).



Desire to uplift
emotional state of others



Desire to improve
well-being of others

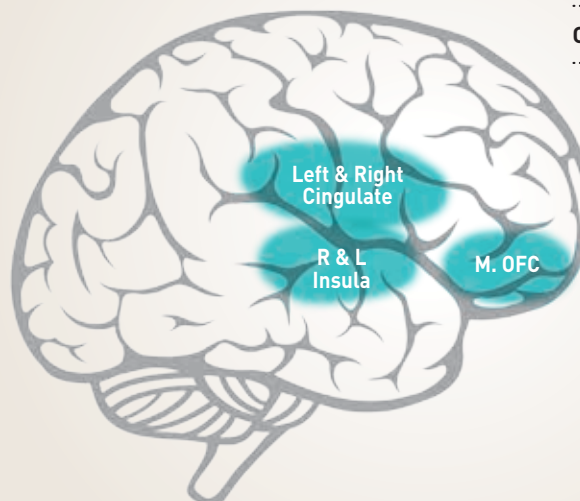


Desire to care
& offer kindness

The compassion cultivation of the curriculum builds on the mindfulness and empathy training by engaging in practices that invite students to send positive wishes to others who are experiencing joy, as well as physical and emotional pain and suffering.

The compassion cultivation of the curriculum builds on the mindfulness and empathy training by engaging in practices that invite students to send positive wishes to others who are experiencing joy, as well as physical and emotional pain and suffering. In addition, the curriculum invites students to offer kind wishes to people whom they don't know as well as to themselves. One's ability to be kind to another/to offer compassion to another in a wish or to take action to assist another in pain and suffering is mediated by perception. As such, compassion cultivation training has been known to reduce implicit bias^{28 29}, stereotype threat³⁰ and reduce racial bias³¹. The objective of the LIBRE compassion training is to cultivate altruistic behaviour.

COMPASSION NETWORK



OFC Orbital Frontal Cortex

... compassion cultivation training has been known to reduce implicit bias, stereotype threat and reduce racial bias. The objective of the LIBRE compassion training is to cultivate altruistic behaviour.

Figure 5

Integrative learning

The LIBRE curriculum aims to reclaim education with utilitarian to that of human flourishing. Critical inquiry acts as a bulwark against a person's intellectual and emotional predispositions towards violence and constantly questions

LIBRE NETWORK

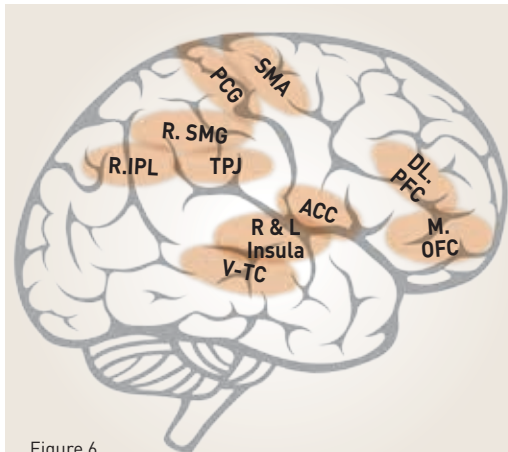


Figure 6

LIBRE attributes

- Deep understanding of global issues, their interconnections between global, national and local systems and processes;
- Skills for independent rational inquiry and critical thinking
- Empathy and compassion for others and the environment;
- Recognition and acceptance of diversity and multiple identity in society

deeply held beliefs and assumptions to rigorous scrutiny, builds resistance to any form of indoctrination. Training of neurocognitive skills, previously referred to as socio-emotional skills, as described by mindfulness, empathy and compassion, will create responsible and caring global citizens who are aware of the consequences of their choices. The ultimate fusion of the LIBRE module recognises the inseparability of the four pillars. Thus, critical inquiry complements mindfulness, empathy and compassion training to liberate learners from deep-seated assumptions, patterns of thinking and biases whilst empowering them to become more aware of the choices and consequences of their compassionate actions and global citizens of the world. This integration is critical in order to achieve the desired objective of re-orienting the purpose of education to human flourishing and well-being.

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²⁶ Klimecki, Olga M., Susanne Leiberg, Matthieu Ricard, and Tania Singer. "Differential pattern of functional brain plasticity after compassion and empathy training." *Social cognitive and affective neuroscience* 9, no. 6 (2013): 873-879.

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Youth Voices

on the education system

#21stCenturySkills

Education systems are failing our children. What do you think?



Sadaf Taimur

“

Because our education system operates on a factory model and every kid is treated and assessed on the same quality assurance criteria without understanding that every child is unique.

“

No matter what and how much talent children have, we turn them into what our curriculum dictates.

Get in, follow status quo and come out pre-configured.



Qurbanali Waezi

“

Because kids are commodities, schools are industry.



Yustinus Vena



Education systems are failing our children. What do you think?



Ruud Sama-Lang

“

Because the education system is oriented in one direction, the kids thinking is oriented in one direction, their imagination is not let allowed to run wild, they are caged in their thinking.

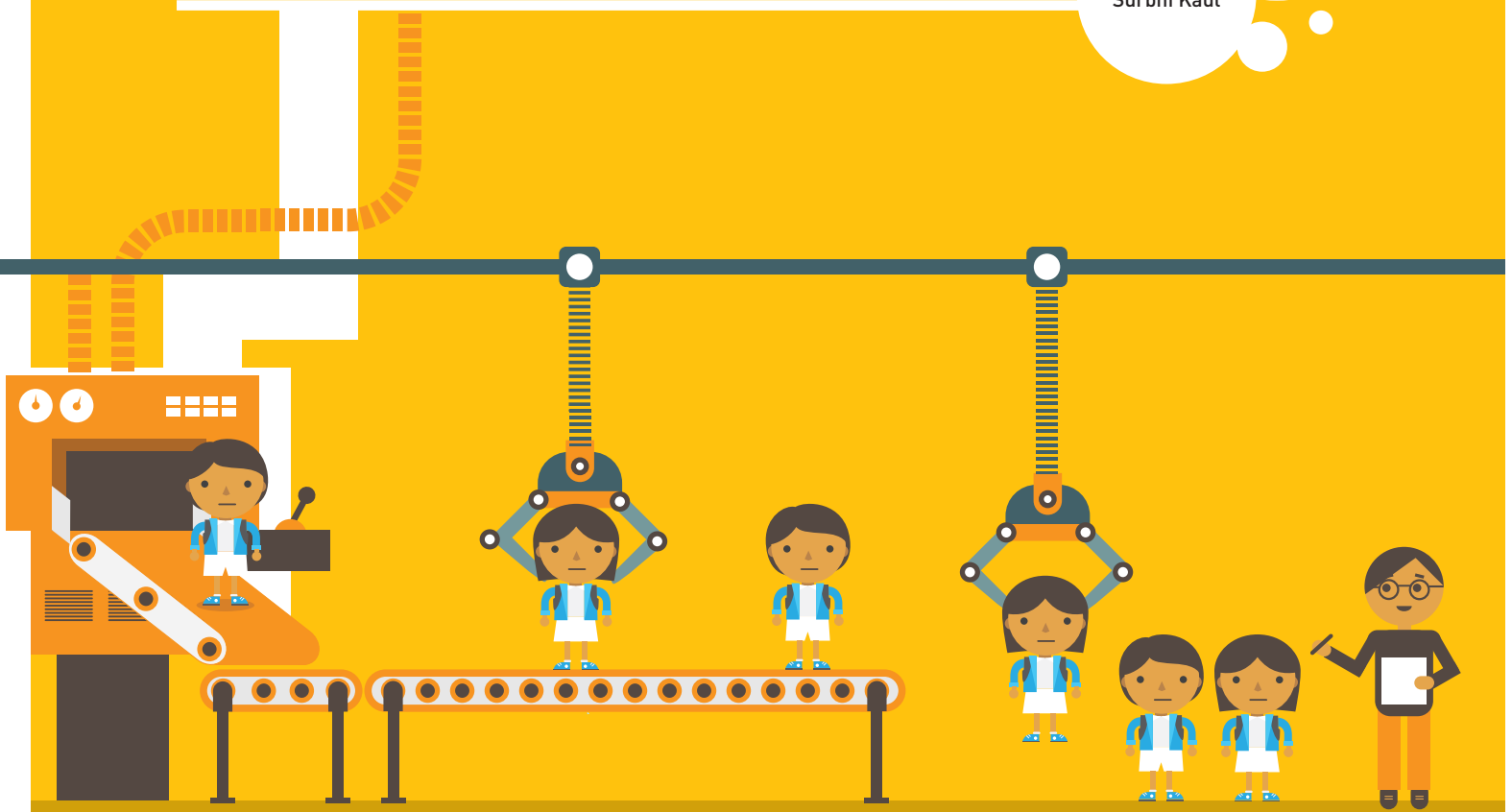
The schools function in the same way -like factories producing the same finished product day in day out with no difference with no variation.

“

The Indian education system is becoming a factory to produce clones, irrespective of what the native intellect is. Poor judgment of talent and intellect is the main reason.



Surbhi Kaul





World Rescue is a mobile-based narrative, video game inspired by the Sustainable Development Goals (SDGs) of the United Nations. Through fast-paced gameplay set in Kenya, Norway, Brazil, India, and China, the player meets and helps five young heroes to solve global problems—such as displacement, disease, deforestation, drought, and pollution—at the community level to achieve a more sustainable world. Each of the five issues that the players help to solve are mapped to one of the 17 distinct Sustainable Development Goals (SDGs) with the overarching theme of Quality Education (SDG 4). Since its launch in March, 2017, World Rescue has been download over 11,000 times.

Where to find World Rescue?

World Rescue is a free to download mobile-based game available both on the Android and iOS stores and has been rated 9/10 by the Children's Technology review for its educational value.

 worldrescuegame.com



United Nations
Educational, Scientific and
Cultural Organization



Mahatma Gandhi Institute
of Education for Peace
and Sustainable Development



सत्यमेव जयते

Ministry of
Human Resource Development
Government of India



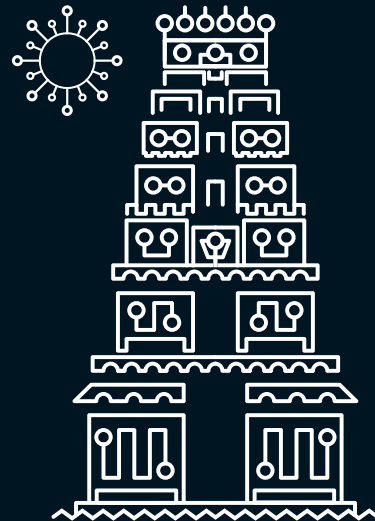
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TECH

Transforming Education Conference for Humanity

2017

VISAKHAPATNAM



TECH 2017

Digital Pedagogies for Building Peaceful and Sustainable Societies

16 – 18
December, 2017

The UNESCO MGIEP is organising an international conference titled 'Transforming Education Conference for Humanity' (TECH) in partnership with the State Government of Andhra Pradesh in Visakhapatnam, India from December 16 – 18, 2017.

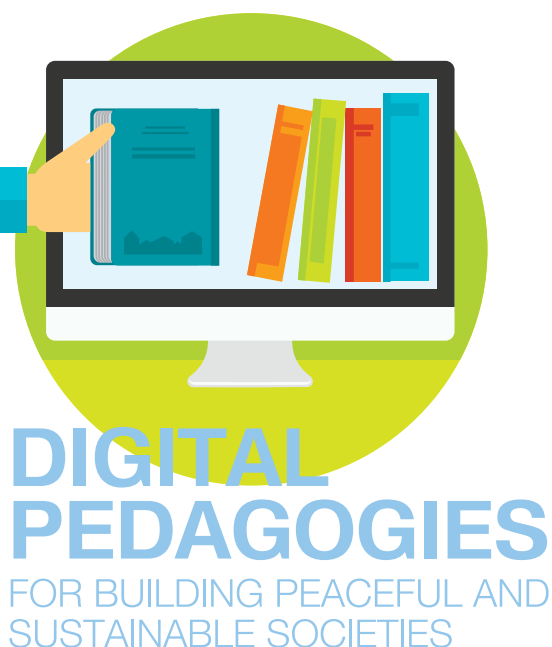
TECH 2017 will be held at the Novotel Varun Beach, Visakhapatnam and will be the first in a series of biennial conferences focused on **digital pedagogies for building peaceful and sustainable societies**, towards achieving the Sustainable Development Goal 4, Target 7.

TECH 2017 will provide a unique platform for learners and experts from across the globe including the youth, Ministers of Education, Information &

Communications Technology and Youth as well as learners, senior policy makers, entrepreneurs, education technology providers, teachers, teacher educators, education psychologists, researchers and neuroscientists to collaborate, innovate and work towards transforming education for humanity.

The Conference will comprise a variety of formats: panel discussions, workshops, e-posters, academic paper presentations and the learning zone.

TECH 2017 is also being supported by the Ministry of Human Resource Development, Government of India and has a knowledge partnership with International Society for Technology in Education (ISTE).



Are you passionate about **digital pedagogies** to foster **peaceful and sustainable societies**?

Do you have **cutting-edge solutions**, products or a pioneering digital pedagogy idea that you believe can **transform the future**?

Call for Proposals

TECH invites submissions for proposals on the following themes that can be presented through a variety of formats:



21st Century Skills

for improving the efficiency of learning using the vast amounts of information available

Innovative tools for measuring outcomes

Teacher training for education through digital platforms

New technology applications in the classroom



21st Century Schools

for Inclusive, Equitable and Quality Education

Digital games, pedagogies and assessments

Fostering social and emotional learning

Digital platforms for design thinking and systems approach to learning.

Artificial intelligence in learning

Augmented and virtual reality as digital pedagogies



21st Century Policies

for the implementation and mainstreaming of digital pedagogies in education systems

Best practices and models in policy development, financing and delivery

Community based approaches in education systems

Issues and challenges in digital equity

Intellectual Property Rights and digital pedagogies



Venue

TECH 2017 will be held in Visakhapatnam in India – a coastal port city, often known as ‘The Jewel of the East Coast’, situated in the state of Andhra Pradesh. Nestled among the hills of the Eastern Ghats by the Bay of Bengal, Visakhapatnam offers the best of India’s vibrant culture, fascinating architecture, jewel-like beaches and gastronomic delights.

Knowledge Partner



To register for TECH, please visit
mgiep.tech



WHAT WE'VE BEEN UP TO AT UNESCO MGIEP

UNESCO MGIEP launches its YESPeace Southern African Region Chapter | 26 January, 2017, Cape Town, South Africa

UNESCO MGIEP along with 12 organisations from 6 countries in Africa (South Africa, Cameroon, Tanzania, Lesotho, Kenya and Namibia) launched the YESPeace Southern African regional chapter on January 26, 2017. After India and Malaysia, YESPeace South Africa is the third chapter of the Network. Prior to the launch, UNESCO MGIEP and ACTIVATE!



Change Drivers jointly organised a strategic workshop from 23 - 25 January with youth organisations and youth from the Southern African region. The workshop provided a platform to showcase the work of each organisation and identify possible areas of synergies. The partners jointly developed an action plan focusing on issues of the region related to education for peace, sustainable development and global citizenship (EPSG).

The YESPeace Southern African Network was launched on 26 January at the Vineyard Hotel, Cape Town. The purpose of the launch event was to share details of the Network with various stakeholders including the media, youth organisations, young people and those working in the area of EPSG. Around 30 people from diverse fields attended the launch event, in addition to the representatives of the YESPeace Southern African Network.

A 'Different' understanding about 'Difference Learning' | 17 February, 2017, New Delhi, India



UNESCO MGIEP in partnership with Orkids hosted the first 'Parents Empowerment Network' for Learning Differences at the India Islamic Cultural Centre, New Delhi. The event brought together experts in the field of learning differences and nearly 200 parents of children with learning differences. The event

commenced with a short video message by Mr. Manish Sisodia, Deputy Chief Minister, Government of Delhi as well as Jenna Ellis, Chair and Katrina Maestri, Board member of the Parent Education Network, USA – the inspiration partner for the event. It continued with numerous people sharing unique and heart-warming experiences of their respective journeys around learning differences. Further, UNESCO MGIEP launched Sixth Space (www.sixthspace.org), an open source, digital one stop repository of all information related to difference learning. UNESCO MGIEP believes that this event is the first step towards creating a network of parents, who can come together with teachers to take action for a better future of their children.

Beyond Sound Awareness: A Webinar by Dr. Michael Hart

22 February, 2017, New Delhi, India



Dr. Michael Hart, a child psychologist with 25 years of experience addressed a webinar hosted by UNESCO MGIEP. Dr. Hart focused on the topic of "Dyslexia and Rapid Automatic Naming: Beyond Sound Awareness." The talk assisted the participants learn about what Rapid Automatic Naming

(RAN) is and how to understand the evaluation and plan for remediation for it. Dr. Hart also helped the participants understand and recognise RAN and how it could assist in understanding the complex cognitive processes that are involved in fluent reading and comprehension. Thereafter, Dr. Hart held a Q&A session that resulted in a diverse conversation with questions ranging from 'the role of technology in increasing the motivation and engagement in reading' to 'lifestyle factors impacting the incidence of learning difference'.

Launch of World Rescue – a mobile-based game inspired by the SDG's | 5 – 8 March, 2017, Ottawa, Canada



At the UNESCO Week of Peace and Sustainable Development, UNESCO MGIEP released World Rescue - a mobile-based game inspired by the Sustainable Development Goals

(SDGs). The game was officially released by Ms. Irina Bokova, Director-General, UNESCO and Dr. Anantha Duraiappah, Director, UNESCO MGIEP.

The research-based video game, takes the players across Kenya, Norway, Brazil, India and China where they take on the roles of five young heroes to solve global problems—such as displacement, disease, deforestation, drought, and pollution—at the community level to achieve a more sustainable world. World Rescue has been designed and developed by Pixel Perfect, a game development company based in Hungary that won UNESCO MGIEP's first-ever International Gaming Challenge in 2015. The challenge received 104 entries from 36 countries, including 32 inter-country collaborations.

World Rescue is available for download on the Google Play Store and the Apple App Store and has already been downloaded more than 11,000 times since its launch.

Talking Across Generations on Education (TAG^e) at UNESCO Week for Peace and Sustainable Development: Role of Education | 5 – 8 March, 2017, Ottawa, Canada

At the UNESCO Week for Peace and Sustainable Development: Role of Education in Ottawa, UNESCO MGIEP's interventions gained recognition for enabling the youth to take centre stage at the Talking Across Generations on Education (TAG^e) plenary.



In the months leading up to the conference, UNESCO MGIEP ran an extensive social media campaign engaging youth from across the globe in a discussion on EPSG. From the thousands of youth who participated, a cohort of 40 high-calibre youth from as many countries was selected for participation in the UNESCO Week. At the TAG^e plenary, these youth came together with 15 high-profile policymakers and officials including Irina Bokova, Director-General of UNESCO, Mitzie Hunter, Minister of Education Ontario and Ambassador Dessima Williams, Special Advisor for Implementation of the SDGs among others, to discuss the role of teachers in education for peace and sustainable development.

The session was streamed live on the web and was also followed extensively on social media, generating more than 20 million impressions in Twittersphere.

YESPeace Workshop: Mobilising youth and teachers to transform education for peace and sustainable development

8 March, 2017, Ottawa, Canada



The UNESCO MGIEP youth delegates came together in full force for the YESPeace workshop on 8 March at the UNESCO Week for

Peace and Sustainable Development in Ottawa, Canada. The aim of the workshop was to provide a platform for

young people working in the area of formal, non-formal and informal education to share their work in the areas of peace, sustainable development and global citizenship and draw upon the discussions on the role of teachers. The format of the session was designed to drive an action-oriented and participatory approach involving group work. The youth were divided in projects and created projects as well as Action Plans to enhance teacher and youth synergies (of people and practitioners).

YESPeace: Introduction of the first ever YESPeace Champion at the UNESCO Week for Peace and Sustainable Development

5 – 8 March, 2017, Ottawa, Canada



UNESCO MGIEP formally announced its first ever YESPeace Champion, Emmanuel Kelly, a professional recording artist, at the UNESCO Week for Peace and

Sustainable Development. At the UNESCO Week, Emmanuel moved the audience with his rendition of the song 'Imagine' and his story of triumph in the face of challenges. As the first YESPeace Champion, Emmanuel is empowered with great responsibility to inspire and aspire young people to create and help achieve qualities to foster more peaceful and sustainable societies.

Summer Reading Camp

15 May - 15 June, 2017, New Delhi, India



UNESCO MGIEP, in partnership with Saajha (a project, established by Pratham, New Delhi in 2013), organised a 4-week summer

reading camp for students of schools from the Municipal Corporation of Delhi. Six camps were organised in North, South and East Delhi comprising of approximately 30 students each. Nearly 150 students, aged between 6 – 10 years attended the camp from 15 May - 15 June 2017. The camp started with a facilitator training session organised on 12 May 2017. Subsequently, the reading camp comprised of weekly sessions for which the content was conceptualised and provided by UNESCO MGIEP. Pre-assessment and post-assessment tests were utilised for identifying children at risk and to understand the scope for improvement through effective intervention.

A study a visit with the UNESCO Tehran Office for delegates from Turkmenistan | 4 – 5 April, 2017, New Delhi, India

UNESCO MGIEP co-organised a study visit with the UNESCO Tehran Office for senior officials from the Ministry of Education and Ministry of Foreign Affairs (Mr. Abdulla Goklenov & Mr. Tachmyrat Jumayev) from Turkmenistan at



the UNESCO MGIEP office in New Delhi, India from 4th – 5th April, 2017. The primary purpose of the visit was to introduce the delegation to various projects that UNESCO MGIEP focuses on towards achieving the Sustainable Development Goal (SDG) 4.7, centered on education for peace, sustainable development and global citizenship to foster peaceful and sustainable societies. The visit commenced with an overview of the Institute by Dr. Anantha Duraiappah, Director, UNESCO MGIEP and continued with presentations and interactive discussion sessions on the various programmes conducted by experts of the Institute. Post the presentation sessions, the delegation and senior management team of UNESCO MGIEP discussed the possibilities of future collaboration between the Institute and Turkmenistan in order to make collective progress towards the SDG's.

Keynote address by Dr. Anantha Duraiappah at the 3rd Annual AFS Asia Pacific International Forum

21 April, 2017, Gurgaon, India



Dr. Anantha Duraiappah delivered a powerful keynote address at the 3rd Annual AFS Asia Pacific International Forum on the topic 'Global Citizenship Education: Essential for Employability

and the 21st Century Workforce'. The event was hosted by AFS Intercultural Programs, India in partnership with The World Bank Group and The Education World. Some of the other speakers included Angela Roye, Chair of the Board, AFS India and Fancisco Marmolejo, Lead Education Specialist, The World

Bank Group, India and Matangi Gowrishankar, Director, HR for Asia Pacific – BP, India.

Dr. Duraiappah described the requirement for education systems to provide future generations with the skills and competencies to manage the uncertainties of the future. He discussed how the present education systems function like an 'assembly line production', developing skill sets in students, which may not necessarily allow them to deal with the challenges of the twenty first century. Dr. Duraiappah referred to the new paradigm of education as 'neurobiological learning', in which the learning process occurs through neuroplasticity. Based on the neurosciences, UNESCO MGIEP is building a 'new integrative curriculum' titled LIBRE that will focus on inculcating competencies of empathy, mindfulness, compassion and critical inquiry in future learners.

UNESCO MGIEP launches the YESPeace Pakistan Chapter and hosts its first workshop

17 – 19 April, 2017, Islamabad, Pakistan

The YESPeace Network organised its first workshop on peer capacity building and strategic planning in Islamabad, Pakistan. Initiated by UNESCO MGIEP, YESPeace is a network of networks which aims to mobilise youth on issues of peace and sustainable

development. With existing chapters in India, Malaysia and South Africa, UNESCO Islamabad is leading the set-up of YESPeace Pakistan.

YESPeace Pakistan is a collective of youth organisations in Pakistan and is actively mentored by UNESCO MGIEP. The partner organisations include Pakistan Youth Alliance/Hive from Islamabad, College of Youth Activism and Development (CYAAD) from Islamabad and the Little Art from Lahore.

The three-day workshop included two days of capacity building and one day of planning – leading to the development of the YESPeace calendar, which will also include an ambitious YESPeace Youth festival towards the end of 2017. The final day saw the participants presenting the YESPeace plan to the Secretary General of Pakistan National Commission for UNESCO and Director of UNESCO, Islamabad.



UNESCO MGIEP Annual Retreat

27 – 28 April, 2017, New Delhi, India



UNESCO MGIEP organised a two-day Annual Retreat for its team members at The Lalit, New Delhi in the end of April. The Retreat was focused on understanding UNESCO MGIEP's organisational culture and focused on team building and collaboration. On the second day, the team focused on mapping its various programmes to define how these span across different age-groups and regions as also identifying how they intersect with each other. Various interactive team building sessions were conducted over the two days, resulting in heightened team engagement and collaboration.

UNESCO MGIEP launches a Virtual Reality Pedagogy Project in partnership with Google Inc.

India



In 2016, UNESCO MGIEP partnered with Google Inc. to launch the Virtual Reality Pedagogy project, an extension of Google's globally renowned programme

'Expeditions'. The programme takes experiential learning to the next level by providing an opportunity for students to experience the real world through virtual reality while sitting in the confines of their classrooms regardless of their geography. Use of virtual reality in classrooms makes the entire teaching and learning process more dynamic, interactive and joyful for the students, which is in-line with the broader philosophy of work at UNESCO MGIEP. The Institute facilitated the shoot at 9 different locations in India and developed a guide for the teachers, focusing on imparting not only basic information about the sites but also integrating the issues related to sustainability, peace, ecology and culture.

UNESCO MGIEP celebrates the World Day Cultural Diversity for Dialogue and Development

April – May, 2017 (Culminating on May 21), World Wide Web (Global presence)



DICE
DIGITAL
INTERCULTURAL
EXCHANGE

UNESCO MGIEP celebrated the World Day for Cultural Diversity for Dialogue and Development

through a series of activities led by the Campus Ambassadors, a group of youth in the age group of 18 – 26 from UNESCO MGIEP's Campus Ambassador's programme, launched to advance UNESCO's vision on cultural diversity and education.

Commencing 25 April, the Campus Ambassadors participated extensively in the 'Ask me Anything' (AMA) sessions on the topics of 'Mindfulness', 'Compassion', 'Empathy' and 'Intercultural Dialogue' with experts from

these fields (such as Chade-Meng Tan, ex-Google and Chairman, Search Inside Yourself Leadership Institute; and Rafael Tyszblat, Manager – Innovation & Program Design, Soliya) as well as other participants from around the world. The AMA sessions were held on UNESCO MGIEP's digital platform 'Knowledge Commons' and generated engaging intercultural dialogue.

Additionally, the Campus Ambassadors co-organised, led and facilitated various activities in generating intercultural dialogue on campus and through social media such as facilitation and participation in a Facebook LIVE discussion of Dr. Anantha Duraipappan on Logical Indian, a social media news channel that brings forth unique stories usually not covered by traditional media.

UNESCO MGIEP launches 'Textbooks for Sustainable Development: A Guide to Embedding' | 8 July, 2017, Bangkok, Thailand

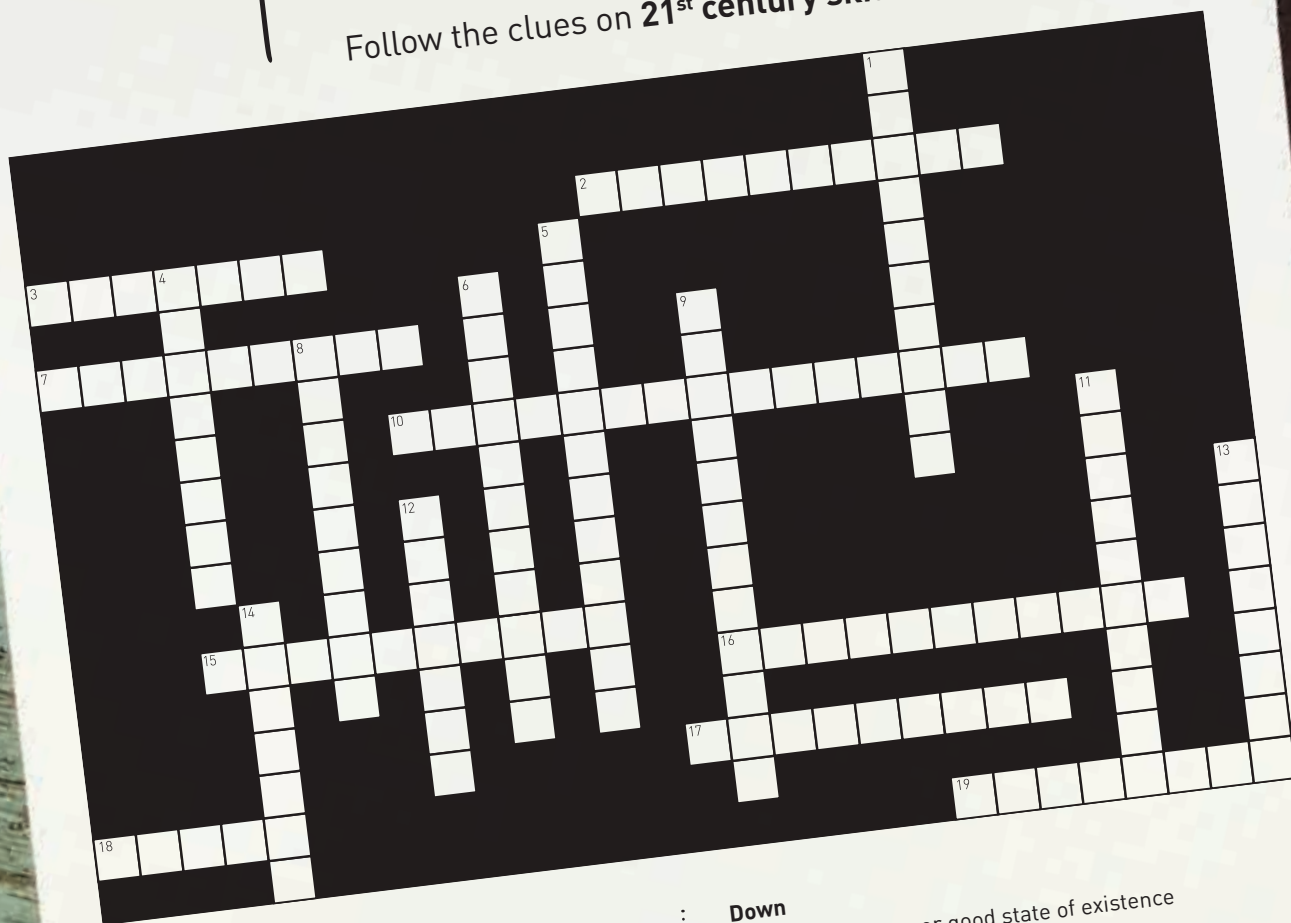


UNESCO MGIEP launched 'Textbooks for Sustainable Development: A Guide to Embedding', an international guidebook on embedding concepts of peace, sustainable development and global citizenship in textbooks of core subjects at the 3rd Asia Pacific Meeting on Education 2030

(APMED III) in Bangkok on the 4th of July. Commonly referred to as 'The Embedding Guide', the book was presented as a viable option to mainstream goal 4.7 (also the theme of APMED III) in education systems through the medium of textbooks. The book was released by Hannes Siege, Advisor, Engagement Global and Yosuke Kobayashi, Japanese National Commission for UNESCO along with Dr. Anantha K Duraipappan, Director, UNESCO MGIEP in the presence of the lead authors of the chapters of the guidebook.

Free as a word

Follow the clues on 21st century skills



Across

2. The academic content taught in a school or a programme
3. The ability of putting yourself in another's place
7. To prepare something to be useful
10. The ability of the brain to form and reorganise connections in response to a learning experience
15. A social and persuasive change in society usually made suddenly
16. State of an open and attentive mind
17. The sense of being accepted as a part of something larger
18. An organ that coordinates sensational, emotional, intellectual and nervous activities
19. Collective human beings or the quality of being humane

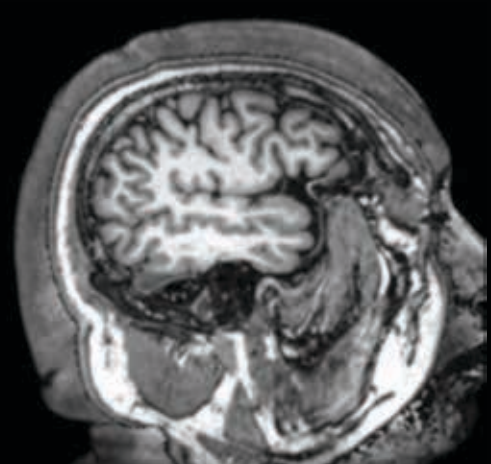
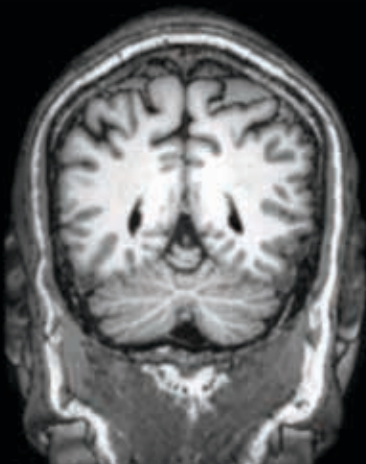
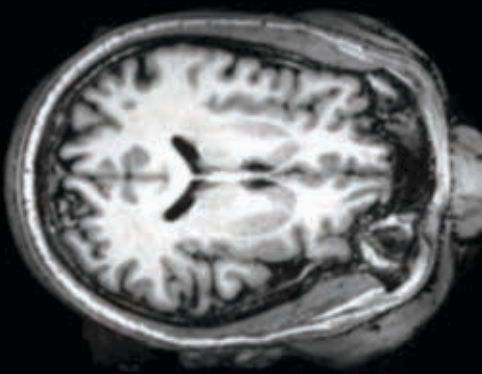
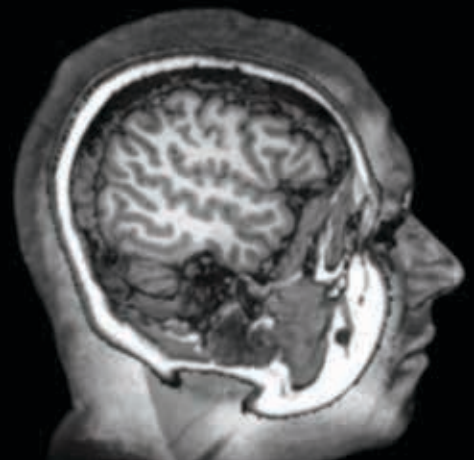
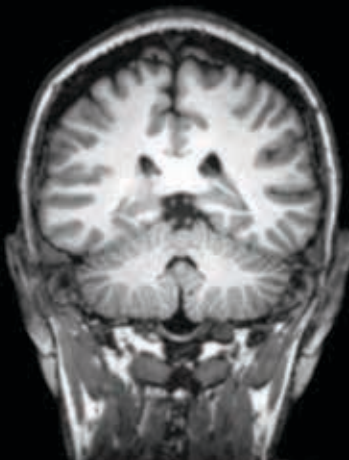
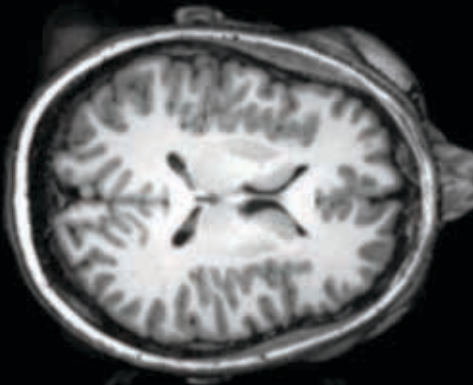
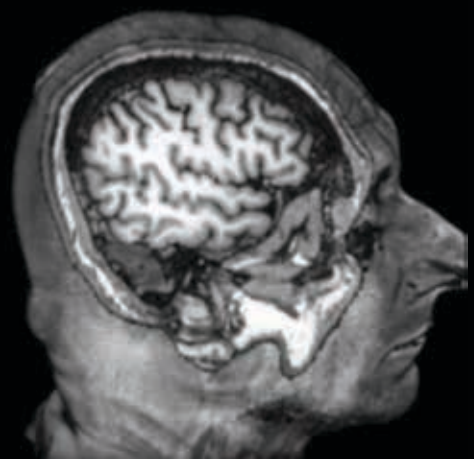
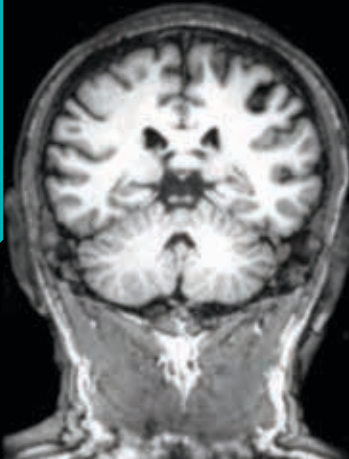
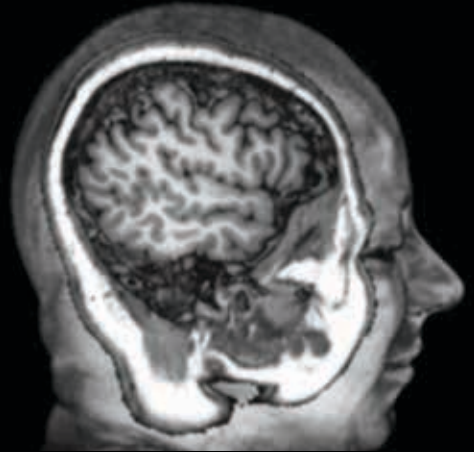
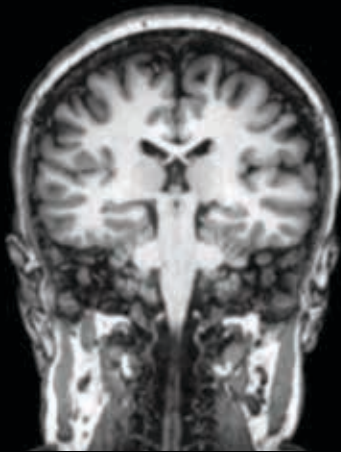
Down

1. A satisfactory or good state of existence
4. Selfless regard for the welfare of another
5. Science that deals with the nervous system and brain
6. A synonym for 'thriving'
8. Awareness with mindfulness
9. A noticeable change in form, structure, or appearance
11. A feeling of empathy and kindness that arises from another's suffering
12. Seeking of information via questioning
13. The method or practice of teaching
14. Basic units of the nervous system

* CHECK OUR WEBSITE (mgiep.unesco.org/bluedot/) FOR THE SOLUTION.

Unity in Diversity

While there may be some similarity in our physical attributes and structure it is true that we are all unique in our own ways. Existing scientific based evidence demonstrates that our brains have the ability to be 'moulded' as a result of their 'neuroplasticity' depending on the way they are trained – through formal and informal learning systems. Based on research and scientific evidence, UNESCO MGIEP has identified four competencies that it believes are essential to impart to youth in order to address 21st century challenges: critical inquiry, mindfulness, empathy and compassion.





United Nations
Educational, Scientific and
Cultural Organization



Mahatma Gandhi Institute
of Education for Peace
and Sustainable Development



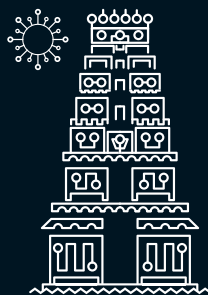
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Ministry of
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Government of India



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TECH
Transforming Education Conference for Humanity
2017
VISA KHAPATNAM



DIGITAL PEDAGOGIES

FOR BUILDING PEACEFUL AND
SUSTAINABLE SOCIETIES

December 16th – 18th, 2017

Novotel Visakhapatnam Varun Beach,
Visakhapatnam, India



21st Century
Skills



21st Century
Schools



21st Century
Policies

JOIN US AND BE A PART OF THE CHANGE!

TECH 2017 aims to highlight the world's best digital pedagogies for enhancing 21st century skills to build peaceful and sustainable societies. The conference will bring together international experts, youth, researchers, decision-makers and policy-makers to discuss, debate, and share their knowledge and innovations.

Find out more at mgiep.tech or e-mail at tech@unesco.org

Knowledge Partner

