



IN Focus

FUTURISTIC EDUCATION

Where we have been is the best indicator of where we are going.

This persists, even in these times of extensive and intensive change, when customs and institutions are revised so frequently and so rapidly, as to appear as *blurs* rather than identifiable constructs.

The human animal resists change. Nowhere is this more true than in the field of education: we know what worked in the past, we know what is good for students, we know what our public & workforce expect of the schools and H.E., we now know what the future-oriented NEP 2020 has proposed and yes, we're also familiar with this quote below! *Yet, we are reluctant to make changes* to our current system of education, beyond superficial modification of class schedules, grouping, course title changes; but *resist change* we still do!

This is true for the *most* of us - trapped within the confines of inflexible syllabi, rote memorisation of humongous irrelevant content across subjects, the race for marks, stress over entrances to H.E. and getting dragged into the vortex of *NON-future ready* competencies. If Education and the Future is what we wish to focus on, let's look at:

- Future of Education
- Future Readiness
- Futuristic Thinking & Education

As rightly stated by Jane McGonigal, PhD, Stanford - *"Thinking about the far-off future is more than an exercise in intellectual curiosity. It's a practical skill that new research reveals has a direct neurological link to greater creativity, empathy, and optimism. Thus, futurist thinking gives you the ability to create change in your own life and the world around you, today."*

“Education is the kindling of a flame, not the filling of a vessel.”
- Socrates

RELATED TERMS

Futures of Education

A global initiative, launched in 2019, and led by **UNESCO** (*United Nation Educational, Scientific and Cultural Organization*), which **aims to rethink and shape the future of education**. The project's stated goal is to try and **mobilize collective intelligence**, **generate debate** and **reimagine** how education can contribute to the common good of humanity.

Future Readiness

A state that is achieved by practicing **strategic foresight** with an awareness of the larger systems that an organization depends on and shapes.

Future Ready Outcomes

Future-ready outcomes (**FROs**) are a series of learning outcomes aimed at reinforcing **skills** that students need now, while also preparing them for an uncertain future.

Future Ready Skills

Future-ready learning is all about developing **lifelong skills** that can be applied in multiple ways. All learning ties back to the question: **How can the learners showcase what they have learned?**

“Education is the passport to the future,
for tomorrow belongs to those who prepare for it today.”

— Malcolm X

QED Talk

NEP 2020's focus on FUTURISTIC EDUCATION

MR. VARDAN KABRA

Co-Founder

Fountainhead School, Surat

Volunteer to the Education Department of Gujarat



■ At the onset, congratulations on your new book "Reimagining Indian Education." What propelled you to write this book?

Thank you for asking. I wrote the book because my personal experiences as both a student and an educationist highlighted the need for significant changes in the education system, particularly in India. I believe that India, being a developing nation, has the potential to leverage its demographic dividend through the right education. Although the National Education Policy is a step in the right direction, there is still a need for substantial changes in terms of focus, understanding of quality education, and implementation.

I wrote the book to also contribute to the ongoing dialogue about education reform and to inspire parents, educators, policymakers, and stakeholders to rethink the purpose and methods of education. The book offers practical insights, examples, and actionable steps to align education with the needs of the future. It aims to empower students, parents, and educators to navigate the challenges and embrace the opportunities that lie ahead.

■ Why and where does "Less is more", fail in our education system?

In my opinion, the "less is more" approach fails in several areas, but the primary issue lies in the *overwhelming amount of content expected to be learned by students*. In reality, we tend to forget a significant portion, possibly 80% to 95%, of the content we have studied in school and college. Subjects like history, civics, geography, sciences, math, and languages are often filled with vast amounts of content. The *burden of memorizing all this content places immense pressure on students*, leaving them with limited time to focus on developing essential skills and attitudes required in the 21st century.

■ In the context of futuristic education, what is the relevance of "skill, not content, is king", as mentioned in your book?

As I just mentioned in the previous question, about not remembering most of the content studied in school and college, the *value of content* today, especially with technology making information and facts more accessible, raises a significant question. This book was written even before the emergence of ChatGPT, Google BARD, and generative AI. However, it was already evident that anything we don't know can easily be looked up on platforms like Google and now on ChatGPT, among others. Consequently, the value of content becomes limited. How many of us actually need to remember a vast array of diverse information in our jobs? It is rare. *What truly matters are skills: analytical skills, critical thinking skills, research skills, communication skills, and self-management skills*. You may refer to them as *skills* or *attitudes*. These are the essentials in today's world. Moreover, most of these skills are *transferable across various fields*. While certain technical skills may be necessary for specific domains, the transferable skills remain common regardless of the field in which one wishes to excel. That, in essence, is the significance of the statement "skill, not content, is king."

■ NEP 2020 advocates *Light but Tight* curriculum; you too have written about *rationalising the curriculum*. How can Boards / Syllabus framers decide *what and how much* is appropriate for an unknown future?

I think it's basically building on what I just talked about regarding rationalizing the curriculum. In my book, I have actually provided steps on how we can go about *rationalizing the curriculum*. A simple way to approach it is by interviewing professionals, especially young professionals in the 25 to 30-year age group, or even older ones in the 30 to 50-year bracket, and asking them how much of the content they learned in school they actually remember. In the book's chapter "Skill, Not Content, is King," I have provided a five-point test to go through. My general assumption is that most of the content in the textbook after grade five or six is not relevant in terms of learning content. However, I'm not saying that it means the content is completely useless. What it means is that *testing students on memorizing that content is useless*. Let me give you an example of how the International Baccalaureate (IB) runs its middle school program from grade 6 to 10:

”

The education system has to enable young people to be great career navigators, to learn transferable skills that enable them to change fields and not just change jobs.

And, to be alert to the changing workforce needs in ways that were probably less apparent previously

— Valerie Hannon

It is *content-agnostic*. The school can choose any content because it is an international program. The board decides on the framework of *skills and attitudes and the context* in which students have to learn. That is what is necessary for today's world and the future. The content the school decides on, whether it's history, economics, business, or science, is important in terms of *building skills*, such as the ability to do scientific research or to develop scientific skills, rather than memorizing definitions of photosynthesis, Newton's Laws of Motion, or specific organic chemistry reactions. Those are not really relevant, but the skills behind them are important. *The future will demand skills, not specific content*, because the content required 10 or 15 years from now is completely unknown. Today's top jobs didn't even exist 10 years ago. So, this is the process through which boards and syllabus framers can decide on what skills would be appropriate for an unknown future.

■ ***Do you think colleges today in the world, including India, would be open to accepting students who dropped out of school but became a self-directed learners? You have mentioned one such example of a school drop out who eventually achieved a PhD and became a professor in mathematics at an elite American University, despite lacking formal schooling and having non-credible performance records.***

I think this is a very important question, especially for parents who recognize the significant issues with the current education system. While college admissions may appear restrictive, it's *crucial to consider that colleges abroad are generally more open-minded*. While top Ivy League colleges may have lower admission chances for such students, they *do have admission processes that look beyond scores, school performance, or formal degrees*. For instance, top engineering colleges in the US would likely be interested in admitting a student who *excelled in Olympiads*, even if they didn't complete formal 12th-grade education. Topping an Olympiad indicates *proficiency* in a particular subject. Additionally, many colleges worldwide are now open to admitting students with *non-traditional schooling pathways*. The **Mastery Transcript Consortium** and similar initiatives focus on reporting *student achievements in terms of skills and projects* rather than narrow subject grades. They are also working on gaining acceptability with many colleges globally. In India, although options may be limited, there are progressively minded colleges that are more open to accepting students without traditional pathways. While I won't name specific colleges, interested readers can research and identify these progressive institutions.

■ ***With reference to Figure 14.1 - Progression of Skills Acquisition on pg.-179 in your book, to what extent will the CGs, Competencies, LOs proposed in the new NCF 2022 and the DNEP-SE 2023 truly align with authentic Competency Based Assessment?***

Whether it is the National Curriculum Framework 2022 or the Draft National Curriculum School Education 2023, I think they have a lot of things right. They understand the basic concept of *competency-based assessment*, and they recognise that learning outcomes, as defined by rubrics and levels of assessment, are necessary for evaluating students. Instead of narrowly judging students based on marking systems, this approach emphasizes a more comprehensive evaluation. The bigger issue, however, is that this method does not cater to the current competitive examinations, which necessitate a ranking system that must be objective for fair comparison. Otherwise, challenges and numerous issues can arise, ultimately leading back to narrowly defined marks. Nevertheless, schools can adopt this system, but boards cannot endorse it entirely, because board marks are becoming less important for entrance exams, particularly with the emergence of JEE Main for engineering and medical courses. The Common Entrance Test (CUET) is also gaining prominence for central universities, with many private universities also accepting it. Through CBA, ranking & marking of students will not be possible, nor will the obsession with achieving the highest marks or being the top student in a school. However, in reality, the CBA system is more authentic & provides a better understanding of students' skill levels, mapped to real-life skills and attitudes, which are essential for success in life.



READ TO SUCCEED

FOR TEACHERS

REIMAGINING INDIAN EDUCATION

- by **Vardan Kabra**

This book is an attempt to **redefine Indian education**. India can't just afford to talk about educational reforms, it needs to bring about a **revolution** in education, otherwise it will miss the much needed demographic dividend. The revolution in education requires us to rethink the fundamental goal posts of education, especially in the 21st century, where the right skills and attitudes are far more valuable than the ability to memorise disconnected facts. A fundamentally new pedagogical and regulatory approach is needed to ensure that all Indian students are equipped to handle the demands of the 21st Century.



FOR STUDENTS

WHAT WE'LL BUILD - *Plans for Our Together Future*

- by **Oliver Jeffers**

What shall we build, you and I? I'll build your future and you'll build mine. We'll build a watch to keep our time. A father and daughter set about laying the foundations for their life together. Using their own special tools, they get to work; building memories to cherish, a home to keep them safe, and love to keep them warm. From renowned, internationally bestselling picture-book creator and visual artist, **Oliver Jeffers**, comes this rare and enduring story about a parent's boundless love, life's endless opportunities and all we need to build a together future.

■ How have you built *Futuristic Foundations at Fountainhead*? Is Fountainhead an epitome of the *Dream School* you mention in your book?

I definitely think that Fountainhead is not the dream school that I mentioned in the book. There are a lot of limitations, some of which are related to the way the IB board is structured. However, I believe the *IB is probably the most progressive board*, and it's also about *how we interpret and implement the IB curriculum*. The IB has schools that vary in nature, so it's more of a legacy that we need to examine. Additionally, societal and parental expectations play a role in shaping our approach to education. We recognize that there are areas we need to work on.

Having said that, there are some things we have started doing to move in the right direction. One positive aspect is that the *IB curriculum is already skill-based and attitude-based. The pedagogy is very student-centered*, with a focus on *inquiry-based and hands-on experiential learning*. However, there are areas where we can make changes, such as implementing more personalized and individualized learning approaches. We want to *engage students in meaningful projects* that matter to them and society. We aim to provide authentic contexts and audiences for their work.

In our school, we have established the **Maverick Learning Center**, which operates on a pure *project-based learning (PBL) model* - a '*can-be*' dream in my book. In this, students *primarily learn through projects*, except for core skills like English and Math, (which are taught as standalone subjects), *in authentic contexts* whenever possible. We are also implementing more PBL and Experiential learning throughout the rest of the school. We are on a journey towards the '*dream school*', but it will likely take 5 to 10 yrs to reach 80-90 percent of our desired goals. We also recognize the need for a *shift in parental mindset*. Just like when we became an IB school in Surat, it required a significant parental adjustment. As we progress on this journey, we will *work together with parents to help them understand the long-term benefits* their children will gain from this approach. We believe it is possible to bring about this change, but it cannot happen overnight. It is a gradual and continuous process.

■ Given the acceleration of AI and the changing workforce scenario, what would be the top 5 key aspects that jobs of the future will demand from students?

The **first** key aspect would be the *ability to learn something new independently*, with guidance and mentorship. The rapid advancement of AI engineering workflow means that job roles are evolving and *we cannot predict how jobs will look* even in the next couple of years, let alone 5, 10, 15, or 20 years from now. Therefore, the *ability to continuously learn and implement new knowledge* is crucial. The **second** aspect is the *development of essential skills like, high levels of numeracy, literacy, comprehension, critical thinking, critical analysis, communication, collaboration, and having the right attitudes* - high demand aspects in the future workforce + skills that focus on a humanitarian aspect, future outlook, and environmental consciousness will also become increasingly important.

■ Your final comments on the role of **TECHNOLOGY** in this educational revolution.

Technology needs to *play a huge role in this educational revolution*. In fact, I keep telling parents, teachers, and any other group that I meet that if there is *one sector that seems to be completely unaffected by technology, it is education*, specifically K-12 education. While there are online coaching and learning tools available, the pedagogy remains mostly unchanged. When we say technology should come into education, it means that *students don't need to learn everything and memorize stuff*. They should be required to *use technology effectively to solve problems* and understand concepts. That is what students should be learning in the classroom and *demonstrating in their assessments*. For this to happen, school systems and boards need to incorporate effective use of technology, and teachers need to learn how to use technology effectively. Systems should be in place to *personalize education, track students' skills and achievements at an individual level*, and provide *individualized pathways* rather than treating education as a batch process, where everyone learns the same thing at the same pace. There is still a lot of work to be done, and ready systems that effectively use technology are not yet widespread. There are experiments & pilots at an initial scale, but there is a long way to go. ***

What a Futuristic Education Looks Like

It is a great point of frustration for many of today's youth that while the rest of the world's industries and sectors are **digitized, hi-tech** and **evolving with time**, the **education system seems to be stuck in the 1920s** – outside of developed countries, including India. Parents and kids alike, are yearning for the entry of a more **futuristic education** that will help to optimize what is considered by many, an *archaic* waste of time, money, and intellectual potential. High time! Aren't our kids the future?

Here are some welcoming emerging trends in Education:

1. Neuroeducation

The emerging field of **educational neuroscience** is shedding light on what works *best* when it comes to learning new concepts and skills. This field is discovering that many mainstream education practices (*in-person lectures, one-size-fits-all lessons, memorization-based testing, unguided homework*), aren't supported by research. One of the pillars is **personalizing the learning process** for each student - either by teaching in small groups or by using AI to cater lessons for the needs of individual learners.



2. Microlearning

Humans have an inherent limit to how much information they can retain from a single learning session. Our traditional education tends to overload students with huge content, long lectures...and expects them to remember everything they just learned.

Microlearning is a form of *spaced repetition learning*, in which lessons are broken up into *bite-sized chunks* and *repeated over time*. This is said to help new concepts and skills sink in for the long term. According to microlearning proponents, short, spaced bursts of learning can significantly boost retention.

3. Online Learning

Covid showed us that Online Learning works! Three major benefits being: *cost, convenience, scale*. It is significantly *cheaper* to take an online course than it is to enroll in an offline programme; secondly, the learning is *self-paced*, and can *happen anytime, anywhere*; and finally, the ability of one incredible educator to reach an unlimited number of students is an amazing *scale of reach*! The "classroom" of the 21st century may be *100% online* (via VR or AR) OR it could be a form of *blended learning* that's primarily online; especially in wake of fewer passionate, qualified entrants into the TEACHING profession!

5. Startups Offer Personalised Online & Homeschooling Options

Lately, a variety of education startups have entered the homeschooling space. *Outschool* (started by former employees of Google, Square, and Airbnb) matches students with teachers online for a live small-group, virtual learning experience. In India, there are many providers offering online 1-1 tutoring. A few examples: *BYJU's, SeekOG* and *K8 School* -> this 3rd one is exclusively for Home schoolers.

4. Instructors With Star Power

Many online service providers, (like *Udemy & MasterClass*) have taken a *unique approach* - instead of hiring professional teachers (like college professors), their courses are taught by **practitioners in a professional field** (often celebrities), allowing students to learn from the successful, the famous and the best themselves! Experience counts!

6. A shift away from Standardised Testing

The *2021 State of Teaching and Learning* survey from 'Instructure' showed that fewer than 30% of parents and teachers felt that high-stakes exams & testing truly measured students' learning. 50% of administrators and 58% of teachers felt that this way of testing is *outdated* and *needs overhauling*. One of the new (rapidly gaining) solutions is **Master Transcript(R)** - a transcript based record of a student's **mastery of subjects & concepts**. No traditional letter grades, not a one-time view of what the student knows / is able to do; rather, evidence & abilities from inside + outside the classroom on **attainment of competencies**. It **prioritizes the higher-order skills** students need in order to succeed in college and the workplace. Students earn "mastery credits" and the transcript serves as an *evolving* sample of their work. ***

(source : <https://explodingtopics.com/blog/education-trends>)

What experts have to say:

1) **Olli-Pekka Heinonen (Dir. Gen, IBO):** "...we will need to transmit to the new generations the cultural and scientific values that we have been able to create so far, and to give capabilities and competencies for them to create, adapt and mould their own future."

2) **Noah Sobe (Senior Program Officer, UNESCO):** "...technology empowers and connects people, ... increasing public investments in digital resources will **help schools**, not replace them. It is vital to focus on an education that creates and nurtures possibilities, and adopts pedagogies that include cooperation, collaboration and solidarity."

(Read more about the **Education Manifesto** : <https://thoughtleadership.org/education-manifesto/>)



Thinking Habits of a Futurist

Most people **don't** think about the future. About 39 per cent of the 12,021 respondents surveyed in the MOTN poll said they don't see things getting any better in six months from now, and 15 per cent are uncertain about the future. Only 35 percent of Americans regularly think about their five-year future. Researchers call this the "**future gap**."

On the other hand, there are a few people, like Rohit Bhargava, who do only that - *think about the future!* Rohit spends each year thinking and writing about **non-obvious trends**, i.e. "*unique curated observation(s) about the accelerating present.*" He says,

“ Learning to think differently is more important than ever.

If you can't *imagine* yourself **in the future**, you will:

- Exhibit less self-control and give in more often to temptation.
- Procrastinate more.
- Exercise less.
- Save less money.
- Give up sooner when challenged.

How to think like a **FUTURIST**

1. Think first person - there are 2 ways to imagine the future: (a) rely on impersonal facts or (b) think in the first person. The former *doesn't* help one to think like a *futurist*, but **first-person thinking** (making it *one's own*) helps to *imagine one's future self in a future time-frame*. If you wish to try it, here's how you could start:

- Make a list of things that interest you, personally. Let's say, your - hobbies, products or services you use regularly, or where you live or like to go for a vacation.
- Run a Google search for "the future of Z"—Z being one of those items on your list.
- Read up articles, or watch videos, or listen to podcasts on - *what the future of that thing might be like*.
- Now, imagine yourself living in *that* future. Ask yourself - "Am I prepared for it?" Or "Will I need to learn new skills?"

2. Signal Hunting - While thinking about the future, you can also start, *watching for and noting signals* of possible futures. According to the *Institute for the Future*, a **signal** is - "*a small or local innovation or disruption that has the potential to grow in scale and geographic distribution...a new product, a new practice, a new market strategy, a new policy, or new technology... an event, a local trend, or an organization...a recently revealed problem or state of affairs.*" Unlike trends, **signals** "*turn our attention to possible innovations before they become obvious..., they often focus our attention at the margins of society rather than the core. In this way, they are more likely to reveal disruptions and innovations.*"

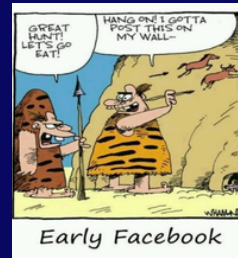
3. Counterfactual Thinking - Another way to exercise a futurist mindset and strengthen one's prediction skills is to imagine *how the past could have turned out differently and what that would have meant for the future*; called **thinking counterfactually**. This involves some "*what if*" scenarios. According to McGonigal, "*It is when you unlock your brain to predict a past that never was, and imagine a future that hasn't happened.*" To get a sense for how this plays out before you try it, read some alternate history books.

4. Foresight habits of mind - According to Futurist consultants Marsha Rhea and De Cagna, you must "*Challenge your assumptions, question your orthodox beliefs and reframe the problem.*" They believe that there are **three** critical thinking processes to break free of the habits and patterns that limit our ability to see new strategic opportunities that can help see the future. They are : *critical analysis, inquisitiveness, and imagination.*

As you can see, **thinking like a futurist** doesn't require specialized skills. In fact, critical analysis, inquisitiveness, and imagination are exactly what the future generation needs. We can help our students (and even ourselves), to think like a futurist. ***
(source : <https://www.wbtsystems.com/learning-hub/blogs/how-to-think-like-a-futurist>)

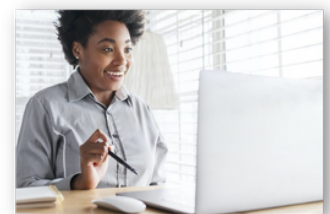
The June '23 issue is the last issue in the Volume 1 series, soon to be available as a compendium. The **July 2023** theme is **The New-Age Educator**. Please send your contributions - an effective classroom strategy / class humour / vocab word / a featured article / book titles, etc. related to the theme to - team@qedrak.com

RIB TICKLERS



Astrologer : Do you want to know about your husband's future?

Wife : Forget his future, I control it. Tell me about his past!



Group of PAWAR PUBLIC SCHOOLS

Mumbai

DAY 1



DAY 2



Teacher training has a continuum that includes initial teacher education, induction and of course, **Continuing Professional Development** or **CPD**. These are closely connected to teacher empowerment, classroom translation and hence, quality assurance and the achievement of learning outcomes.

While many schools plan out series of CPD workshops at regular intervals throughout the year, there is usually a spurt of such sessions at the onset of a new academic session.

Team QEDRAK feels privileged to have had the opportunity to offer their *Teacher Enrichment Services* to many schools in the last two months.

Covered in this issue is the photo-journey of the **two full-day training sessions** we enjoyed with the passionate, curious and interactive teachers from across the 4 **Pawar Public Group of Schools** in Mumbai - viz. *PPS Bhandup* (the host of the CPD), *PPS Dombivli*, *PPS Kandivli* and *PPS Chandivli*.

DAY 1 : addressed the teachers of the Foundational and Preparatory Stages, on the Understanding of NEP 2020, NCF-Foundational 2022, as well as the new insights in the DNCF-SE 2023. The special focus in this session was on the Foundational Literacy and Numeracy aspects linked to the forthcoming Key Stage Census Assessments in Grades 3 and 5.

DAY 2 : had the teachers of the Middle and Secondary Stages, understanding the same NEP & NCF frameworks, as above. The special focus here was the Vocational Skills programme and the new flavour of subject selection and Curricular areas of grades 9-10, Grades 11-12, which are proposed to have 8 Curricular Areas, with a choice of 4 disciplines, each with 4 papers = total of 16 papers to be completed semester-wise.

Across both days, the newly released subject-wise|stagewise: Curricular Goals, Competencies & Learning Outcomes were discussed. The shift from *Content* to *Competency-Based Education*, the integration of Art Education, PE, Environment Education, SDG4, GCEd, 21C skills with core subjects were covered with relevant examples. Our heartfelt gratitude to all the Principals of the PPS group for this opportunity, their presence, impeccable hospitality & arrangements. We look forward to many more stimulating sessions. ***

ST. GREGORIOS HIGH SCHOOL

Mumbai

Lately, the demand for CPD to comply with NEP 2020's focus on *Integration* has seen a sudden surge. Team QEDRAK brought the relevant topic of *Cross-Curricular Integration* to the **St. Gregorios High School** teachers in Mumbai. Covering 2 full days of intense *Learning By Doing*, the workshop covered all aspects of developmental and cross-curricular domains, along with the strategies for integrating core subjects with the *Arts, Sports, Storytelling, KOI, KOW, SDGs, GCEd. and Technology*.

Glimpses of Days 1 & 2



RESOURCES AND
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