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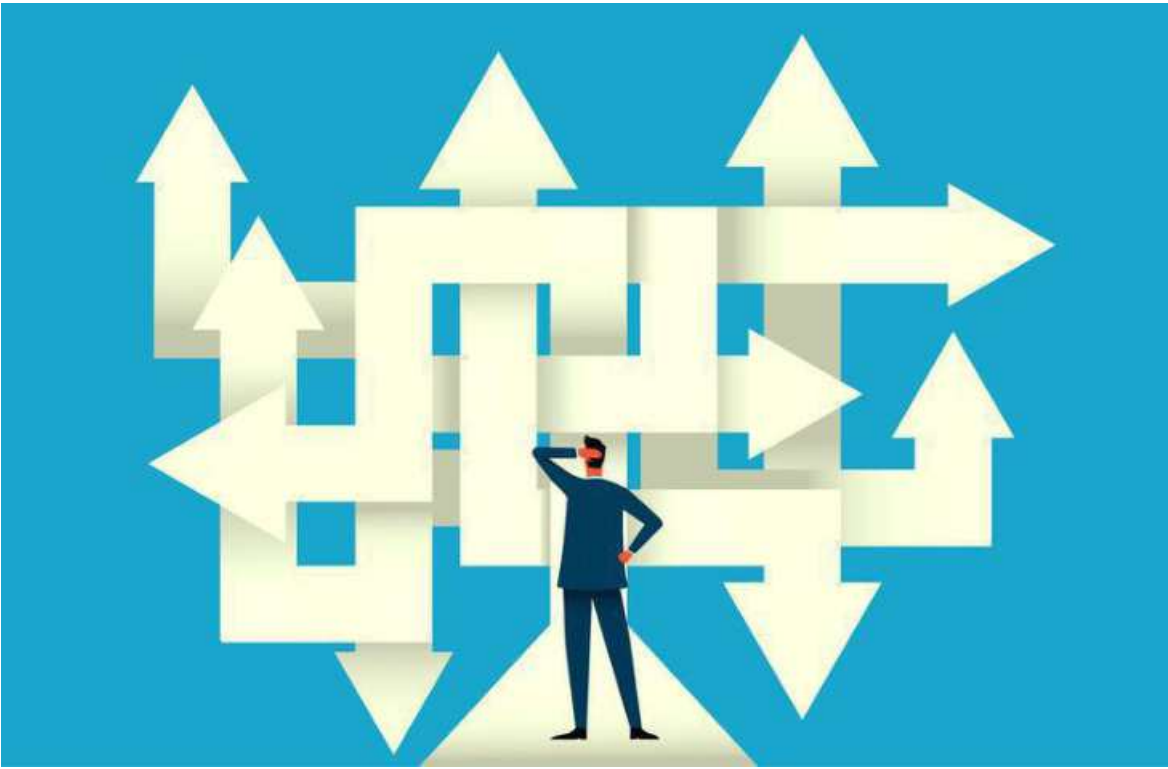
Eleven minutes. That is the attention span of an average student. To cope with this, instructional designers and content creators break down information into bite-sized pieces and quick answers, in the name of making learning easier. Learning to focus is not the only skill needed in an age of flashy videos and endless notifications. One of the most underrated skills is to appreciate the value of complexity. In a world where everything is expected in neatly ordered packages, we shy away from complexity. It is natural to seek clear-cut answers and simplified narratives. But such an approach to learning ends up in a filtered reality. Convenience is favoured over meaningful learning. Most real-world scenarios are inherently unpredictable and complex.

Complex, complicated and simple What does being complex mean? How it is different from being complicated? What is the role of simple and simplistic? Complexity is not about jargon and equations. Complexity is not chaos. There is an underlying order, even if it is tricky to see. It is understanding the interconnections that make the world move. It is a dance

of parts as in ecosystems or a well-orchestrated symphony. In contrast, complicated suggests a tangled mess, like a knotty rope or a malfunctioning gadget that can be fixed with effort, where the result is predictable. To make complex things simple and understandable is a difficult task that requires a lot of clarity. Paradoxically, those efforts begin from appreciating the complexity of the learning material. Ask an accomplished learner in any field, and they will likely recount sailing through complexity to reach their current clarity of thought. Simplicity will remain the ultimate sophistication. On the other hand, being simplistic means you are falling for the danger of oversimplification, which leaves out the richness of the skill and strips away the depth of learning. Many rate the severity of the climate crisis at 10 on a 10-point scale while the personal response remains below. We need large-scale actions that grasp the complexity of actors in such challenges to go deeper than a packaged curriculum, warns Manish Jain, co-founder of Complexity University, a platform addressing complex challenges faced by humanity. As every academic discipline is an adventure in complexity, the ability to appreciate complexity leads to meaningful

Decoding complexity

If we really want to address the messiness of the real world and build better things, we need to engage with the idea of complexity



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learning experiences. How can we embed complexity into education without overwhelming students? **Possible tools** Could a butterfly flapping its wings vigorously in a remote part of India create a tornado in California? It may happen according to chaos theory, a concept in the study of complex systems. It is

about how small changes or tiny actions can lead to unexpected results in complex systems. System thinking is a prominent way that learners can apply to understand complexity. The world is full of systems and everything around us – from the classroom to the cosmic – connects in complex yet fascinating ways. Another way is abstraction: distilling the es-

sence from the chaos. Abstraction helps students focus on the essentials of a concept and filter out irrelevant details. At first, the concept may appear messy but, with exploration, we understand the inter-connectedness holistically. Skills of abstraction make complexity manageable just like using a map as a guide to a new terrain. Like stories lure

our attention towards meaningful knowledge, skills of abstract thinking allow us to grapple with complexity. While many think trigonometry is difficult, the real problem is that we think of the topic as a dry collection of formulas devoid of any practical use. Or we fail to present the abstraction involved in the subject in concrete and useful

ways. Once we are familiar with the abstractions used in trigonometry – how energy or shapes dance in Physics, build bridges and navigate stars – learning takes a different turn. Engaging with diverse learning material and narratives is another way to enhance cognitive flexibility and critical thinking and see the complexities of varied human experiences.

The sweet spot If we do not learn to appreciate the complexity, history will always be learned like good people versus bad people, thereby ignoring the beauty that makes the subject interesting. It will also lead to simplistic learning, a case of shallow education. So, the next time you struggle with a new skill, remember to appreciate its complexity. Seek good abstractions, search for diverse perspectives, encourage questions over answers, and explore connections over isolated facts. Where is the sweet spot of a balance between understanding complexity and making things simple? Complex enough to pique interest, abstract enough to keep focus, and deep enough to satisfy the curious mind.

(Views expressed are personal)

The writer is Deputy Secretary with University Grants Commission, New Delhi.

SCHOLARSHIPS

National AIDS Control Organisation (NACO) Internship Programme

An opportunity offered by the Ministry of Health and Family Welfare, Government of India. **Eligibility:** Open to Indian nationals pursuing UG, PG, M.Phil., and Ph.D. courses in specified disciplines. **Rewards:** ₹8,000 monthly and a completion certificate. **Application:** Through post: Deputy Secretary National AIDS Control Organisation (NACO) 9th Floor, Chandralok Building, 36, Janpath, New Delhi - 110001, or mail naco.internship@gmail.com **Deadline:** Round the year www.b4s.in/edge/NACO1

Summer Research Internship Programme

A research opportunity offered by IIT-Gandhinagar. **Eligibility:** Open to Indian nationals pursuing a Bachelor's or Master's degree at an Indian institution. **Rewards:** ₹2,000 weekly and other benefits. **Application:** Online **Deadline:** March 5 www.b4s.in/edge/SRIP2

Bhalodia-Khetan Summer Research Excellence Award

An opportunity offered by IIT-Gandhinagar to recognise outstanding research by students participating in the Summer Research Internship Programme (SRIP) at IIT-Gandhinagar. **Eligibility:** Open to students who have completed the SRIP **Reward:** ₹50,000 (one-time) **Application:** Online **Deadline:** March 5 www.b4s.in/edge/BKSA1

Courtesy: buddy4study.com

Train the teacher

With education becoming a dynamic domain, capacity building programmes for educators enable them to face the challenges of today's environment

Varinder S. Kanwar

After COVID-19, educators found themselves at the forefront of a digital revolution in the classroom, grappling with the challenges of seamlessly integrating technology into their teaching methodologies. The hurdles ranged from inadequate access to the Internet to finding relevant digital resources. However, the most pressing issue was the insufficient training provided to educators, impeding their ability to harness the full potential of digital tools in education. As educational institutions progressively embrace digital technology as an integral part of their curricula, the necessity for robust capacity-building programmes is crucial in bridging this gap and empowering educators.

Capacity building involves enhancing an individual's, an organisation's, or a system's knowledge, skills, and capacities to carry out their tasks efficiently. In education, it transforms into a calculated strategy to augment the capacities of instructors, enabling them to adjust to shifts, introduce novel pedagogical approaches, and consistently elevate their professional proficiency.

Dynamic domain In India, the National Edu-



PIXABAY

cation Policy (NEP) 2020 emphasises effective teacher training programmes and ongoing professional development, programmes like Sarva Shiksha Abhiyan (SSA) and Rashtriya Madhyamik Shiksha Abhiyan (RMSA) seek to provide all students with access to high-quality education by focusing on improving teacher recruitment and training and the Integrated Teacher Education Programme (ITEP) covers both pre-service and in-service training for educators.

With pedagogy, technology, and curriculum design constantly evolving, education is a dynamic domain. To stay current, educators must pursue ongoing professional development. Building capacity becomes essential for several reasons:

Technological advances: Education cannot function without digital technology. To create a more engaging and productive learning environment, educators need to be able to use technological resources in their lesson plans effectively.

Pedagogical innovation: New studies and approaches in education are constantly being developed. Building capacity allows educators to experiment and adopt cutting-edge strategies that meet the demands and styles of a wide range of students.

Diverse student

needs: Classrooms have greater diversity now than ever and educators must be well-versed in inclusive practices, differentiated instruction, and culturally sensitive teaching.

Benefits Apart from being beneficial for educators, capacity building initiatives have an impact on the education system as a whole. Some of these positive effects are:

Effective instruction: Educators are more prepared to use instructional practices that improve student learning outcomes.

Professional growth: Continuous learning fosters growth, allowing educators to stay motivated, engaged, and passionate about their roles.

Job satisfaction: Educators who feel empowered and develop the confidence to tackle the demands of contemporary education, leading to better job satisfaction.

Thus, developing capacity is essential to equip educators to deal with the challenges of the modern educational environment. Educational institutions should provide customised programmes that suit the changing demands and promote a culture of continuous improvement culture in education.

The writer is the CEO of National Accreditation Board for Education and Training (NABET).



OFF THE EDGE
Nandini Raman

My son is in the final year of B.Tech. Computer Science in Tamil Nadu. He wants to do a Master's in Data Science. What are the suitable colleges in India or abroad? Venkatesan

Dear Venkatesan,

There are several reputed institutions both in India and abroad. The decision depends on factors like the quality of education, exposure, career prospects, financial considerations and personal preferences. In India, check the following institutions: Indian Institute of Technology (IITs), Indian Institute of Information Technology (IIITs), Indian Statistical Institute (ISI), Birla Institute of Technology and Science (BITS) Pilani, Delhi University, University of Hyderabad and Anna University. Abroad, high-quality programmes are offered by Stanford University, Massachusetts Institute of Technology (MIT), Carnegie Mellon University, and University of California-Berkeley, in the U.S.; the University of Oxford, University of Cambridge, Imperial College London, University College London (UCL), in the U.K.; Australian

Identify your goals

Uncertain about your career options? Low on self-confidence? This column may help

National University (ANU), University of Melbourne, University of Sydney, in Australia and University of Toronto, University of British Columbia, and McGill University, in Canada. Check the curriculum, faculty, research opportunities, and infrastructure to ensure they align with your son's career goals. Evaluate the job market and opportunities available after the programme, both in India and abroad. Also consider, tuition fees, living expenses, and other costs associated with studying abroad versus studying in India. Take a decision that aligns with your son's long-term career aspirations.

I am a history graduate and passionate about policy studies. What are my career prospects if I do a Master's in Governance and Policy Studies? Would a Master's in Social Work be better? Abarna

Dear Abarna,

Pursuing a Master's in Governance and Policy Studies or a Master's in Social Work can lead to very different career paths, and the choice depends on your

interests, career goals, and preferred work areas. A Master's in Governance and Policy Studies can help you become a policy analyst, researcher, public administrator, lobbyist, or consultant in international organisations (such as the United Nations, and World Bank) to provide global governance and policy initiatives. A Master's in Social Work will get you roles as a social worker, counsellor, community developer. You will be able to join human services management or HR roles, or get into policy advocacy and social justice. Identify what aligns closely with your interests and what you want to do long term. If you want to analyse policies, work in governance or influence policy decisions, the first option may be better. If you prefer working and engaging directly with individuals and communities, then the MSW would be a better fit.

I have finished B.E. in Civil Engineering. I love Nature. Are there career opportunities related to the environment? Pooja

Dear Pooja,

You can consider options such as Environmental Engineering, Water Resources Engineering, Sustainable Construction and Green Building Designs, Environmental Consultancy, Environmental Impact Assessment (EIA) Specialist, Urban Planning and Development, Renewable Energy Specialist, Conservation Scientist or Ecologist. Consider doing a Master's in Environmental Engineering, Environmental Science, Sustainability, or a related field that could enhance your knowledge and skills. Certifications in Green Building Design, LEED certification (Leadership in Energy and Environmental Design), or other credentials will help boost your qualifications. Connect with professionals in the environmental sector, attend workshops, seminars, and industry events to expand your network and stay updated with the latest trends and opportunities.

My son is doing a B.Sc. in Analytics and Sustainability Studies in Mumbai. He plans to do an Integrated M.A. Economics. What are his prospects? Prakash

Dear Prakash,

Combining a Bachelor's degree in Analytics and Sustainability with an Integrated Master's in Economics can lead to diverse career opportunities. He could become an economic analyst, a sustainability consultant, a policy analyst in Sustainable Development, an environmental economist, a researcher, a corporate sustainability manager and so on. Let him work on developing his skills in statistical analysis, data visualisation, and econometrics quantitative. Internships with practical experience in economics, sustainability, or analytics-related roles will help build a professional network. The interdisciplinary background will provide a competitive edge in various sectors where understanding economic principles and sustainability practices are becoming increasingly crucial. Let him explore his interests and network with professionals in both fields to gain varied insights and opportunities.

Disclaimer: This column is merely a guiding voice and provides advice and suggestions on education and careers.

The writer is a practising counsellor and a trainer. Send your questions to eduplus.thehindu@gmail.com with the subject line Off the Edge

SAVE THE DATE

MBA in Healthcare Management

NMIMS' School of Business Management has opened admissions for its full-time MBA in Healthcare Management programme. **Eligibility:** An MBBS, BDS, BPT, BHMS, BAMS, BUMS, BYNS degree or a degree in Pharmacy, Medical Technology, Biotechnology, Bio-Medical, Food Nutrition and Dietetics,

Pharmaceutical Chemistry and Technology, Pharmaceutical and Fine Chemicals Technology, Microbiology, Bioengineering with at least 50% aggregate marks. **Deadline:** March 31 https://bitly.ws/39NIY

Admissions open at Pearl Academy

Pearl Academy invites applications for UG and PG programmes in Fashion, Business, Interiors, Communication Design, and Product Design **Eligibility:** For UG

programmes, a 10 + 2 pass certificate; for PG programmes, a Bachelor's degree/diploma from a recognised university. **Deadline:** April 15 https://bitly.ws/3cLsr

M.Sc. in Economics

NMIMS Deemed-to-be University's Sarla Anil Modi School of Economics has opened admissions for its M.Sc. in Economics. **Eligibility:** Graduate in any stream from a recognised university with a minimum of 50% aggregate marks with Maths or Statistics in Class

12 and graduation **Deadline:** May 12

PGP in Family Business and Entrepreneurship

The Great Lakes Institute of Management, Gurugram, launched a one-year full-time Management programme for entrepreneurs and those involved in generational businesses. **Eligibility:** A recognised UG degree with a minimum score of 50%. valid CAT, XAT, GMAT, NMAT or Great Lakes Aptitude Test (GREAT) score. Applicants must show

association with family business or entrepreneurial spirit

Deadline: February 29 https://bitly.ws/3dkgA

Certificate in Technology-Enabled Sales

Hero Vired launched a three-month Certificate Programme in Technology-Enabled Sales in collaboration with LeadSquared to prepare learners for the future of consumer-centric sales. **Eligibility:** Graduate degree **Deadline:** March 23 https://bitly.ws/3cLrg

