

EDUCATION PLUS

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Salil Sahadevan

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 is it 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 knoty 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 interconnectedness 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.

Technological advancement: 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.



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:

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

Job satisfaction: Educators who feel empowered are more competent 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).

Diverse student



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,

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

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, Communication Design, and Product Design.

Pharmaceutical Chemistry and Technology, Pharmaceutical and Fine Chemicals Technology, Microbiology, Bioengineering with at least 50% aggregate marks.

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>

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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 (GLAT) 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>

CAREER CUES
Richa Dwivedi Saklani

Should I go for a Master's degree abroad? When is the ideal time to apply? Should I start the application process during the final year of college? Or work for a few years? How many years should that be? Here are a few factors to consider.

UG duration

Many universities in the U.S., Canada and Australia need 16 years of education – which means 12 years of school and four years of graduation. If you are aiming for these destinations, a three-year degree leaves you with very few options. In this case, apply for a one-year postgraduate degree/diploma course to bridge the gap, rather than to apply for a Master's with limited choices.

Career goals

Those aspiring to be a researcher or professor will probably do best with a combined Master's and Doctorate, which many in-

sistutions offer. For a professional/corporate career, a two-year Master's degree that gives you a year to get your bearings and start performing academically, and another to focus on job applications and interviews will be better.

Target jobs

If you know what jobs you are looking for and are seeking a specific degree, go for a Master's programme sooner than later. However, if you are still unsure or if the degree is one you have no experience of studying or working in, get some experience and validate your choice before investing time and money in a degree abroad. For instance, a Computer Science graduate hoping to specialise in AI or a designer hoping to specialise in Interface Design is more ready for a Master's than an Economics or Maths graduate hoping to transition to Data Analytics, or a History graduate hoping to move into Public Policy.

Research trends

Your main aim in doing a postgraduate degree may be to leverage the Master's route to transition to a new country or economy. However, this demands a few



Factors to consider while applying for Master's abroad

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months of in-depth research to choose the right destination.

In a world grappling with a recession, job opportunities are limited almost everywhere. Of course, there will be a recovery and you can hope to hit the upswing when

you graduate but run through LinkedIn jobs and Indeed in your destination countries to see what jobs are available and the value of the degree you want to do. A simple and open-minded search may help you align your degree with job trends.

For instance, research if Organisational Psychology majors are more in demand or Cognitive Psychology and Behavioural Science. Are mechanical engineers more in demand or those with a Master's in Robotics? What skills do these jobs ask for? Can you

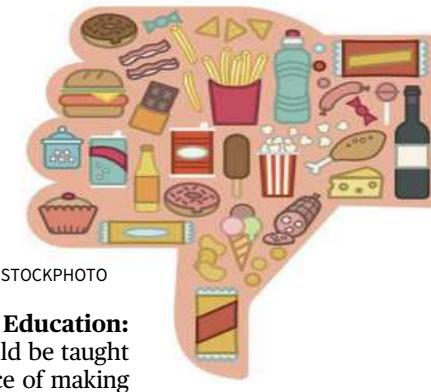
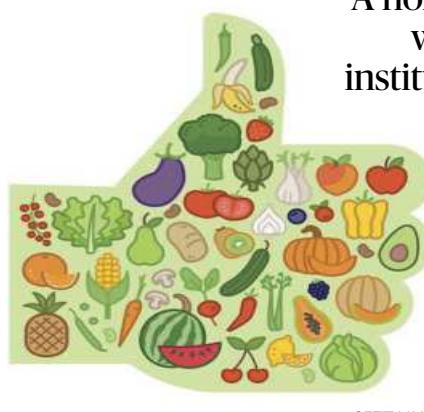
aim for degrees that offer these specialisations?

Pre-requisites

Several Master's degrees offer specialisations within a discipline, and demand some academic pre-requisites during your school and graduation years. For

Healthy choices

A holistic approach to nutrition and wellness within educational institutions has the potential to yield long-term health benefits



GETTY IMAGES/ISTOCKPHOTO

Nutrition Education: Students should be taught the importance of making healthy food choices, understanding nutritional labels, and recognising the impact of diet on their health. This will empower them to make informed decisions about their food, both in the institution and beyond.

Wellness Initiatives: Introduce programmes that encompass physical activity, mental health support, and nutrition awareness to promote the idea that physical health and mental well-being are interconnected.

Collaborate with local farms: Foster partnerships with local food producers to source fresh and seasonal produce for cafeterias.

Lavanya Thirmavallam

he responsibilities of educational institutions should include and prioritise the physical and mental well-being of students. A crucial aspect in this is nutrition. The food that students consume directly impacts their cognitive abilities, concentration, energy levels, and overall well-being. Students who have access to balanced and nutritious meals tend to have better attendance records, improved test scores, and reduced behavioural issues. A well-nourished brain is better equipped to process information, solve problems, and think creatively. What can educational institutions do to help students get access to good food? Here are some answers:

Healthy lunch programme: Provide balanced wholesome meals that include a variety of fruits, vegetables, lean proteins, and whole grains. These should be designed not only to be nutritious but also delicious, making them more appealing to students.

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Holistic approach Students who consume a healthy diet tend to perform better academically, as they receive the necessary fuel for the brain.

This, in turn, results in enhanced cognitive functions, improved memory, heightened focus, and better academic achievements. Nutrition also has a direct influence on behaviour. Diets high in processed foods and sugar often lead to mood swings, irritability, and hyperactivity, none of which is conducive to learning.

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Challenges While undeniably transformative, implementing the

A third issue is food preferences, especially when students are accustomed to processed and fast foods. A linked concern is food insecurity when some students do not have access to food at home due to various problems. Institutions can collaborate with local charities and government programmes to ensure that these students have access to nutritious meals.

Finally, institutions must recognise cultural diversity and its influence on dietary choice. This means providing a diverse range of options that cater to different cultural and dietary backgrounds. Institutions can also educate students about reducing food waste, which is an integral component of sustainable nutrition.

It is imperative that more and more educational institutions embrace these initiatives and work to help their students lead healthier and more productive lives.

The writer is the Principal, Orchids The International School, Perumbakkam, Chennai.

Sumit Kumar

Over the past decade, many industries have started incorporating green practices, creating the need for skilled individuals who can support a sustainable digital economy. India's ongoing transition to a green economy presents the potential of creating 50 million net new jobs by 2070. This heightened concern about environmental issues and the pressing need for sustainable practices have transformed vocational education.

Traditional vocational education has long been associated with preparing students for hands-on careers, from electricians and plumbers to welders and automotive technicians. However, the impact of these vital fields and their activities on the environment has often been overlooked. This is where sustainability and green training in vocational education come into play.

The writer is Chief Strategy Officer, TeamLease Degree Apprenticeship.

Strike a balance

Modern vocational edu-

cation curriculum strikes a balance between teaching technical skills and the environmental implications of the chosen careers. For instance, including biodiversity conservation and waste management in the curriculum encourages students to consider the environmental consequences of their actions in the workplace. Integrating green training in vocational education helps foster an ecological mindset and helps build a sustainable world by creating awareness of the efficient use of resources to ensure reduced waste and other sustainable practices.

Global production is currently at the crossroads of two intertwined transitions: the green and the digital. Together the two are often referred to as the twin transitions that are reshaping the landscape of production and consumption. According to a report by Forbes India, Indian companies are increasing their focus on sustainability and green training in vocational education.

The report also states that

The role of a sustainability

manager saw a total growth of 28.6% since 2016, making it the fastest-growing green job across APAC, with India seeing a 16% growth in demand.

Green jobs can be found in all sectors, including agriculture, industry, services, and administration, and they encompass roles that protect ecosystems, reduce resource consumption, decarbonise the economy, and minimise waste and pollution. A global study by the International Labour Organization (ILO), covering 21 countries, reveals that skills profiles within existing occupations will undergo significant changes to make all jobs greener. In this rapidly evolving landscape, there is a growing need to develop a wide range of skills that should also enhance learners' creative, entrepreneurial, and innovative skills, grounded in critical reflection on attitudes and values, a core aspect of Education for Sustainable Development (ESD).

The writer is Chief Strategy Officer, TeamLease Degree Apprenticeship.

freelancing in India is growing quickly, as the nation is pushing the gig economy. Factors such as robust digitisation initiatives, strong government support for gig workers, numerous online platforms for freelancers, and special tax benefits for freelancers are making it an attractive career option. However, success is determined by one's skills and abilities in improving and popularising themselves.

Flipside

However, freelancing comes with its fair share of challenges. One's income depends on the projects and the nature and amount of work to be delivered. This means that there aren't regular paychecks. However, careful financial planning will help you manage expenses during the slack period. With increased access to the Internet, freelancers from across the world offer competitive rates and present stiff competition for those aspiring to enter the domain. Unpredictable workload, inconsistent work hours and payment delays are other challenges.

Yet freelancing can be a rewarding and fulfilling career option because of its benefits. A combination of functional skills and personal abilities will help you navigate the rough terrain.

The writer is Head and Professor, School of Business Studies, CMR Institute of Technology, Bengaluru.

Embrace independence

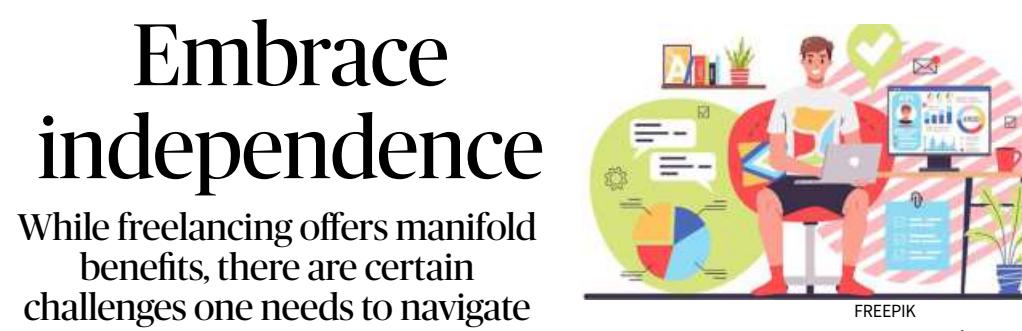
While freelancing offers manifold benefits, there are certain challenges one needs to navigate

M. Sandeep Kumar

Aman was very passionate about computers and graphics from the age of 12. After Class 12, Aman joined a neighbourhood institute to learn Graphic Designing and grew up to become an expert in his chosen area. While everyone expected

him to join an IT, gaming or media and entertainment firm, he chose not to stick to one company. Instead, Aman decided to offer his expertise to multiple companies who needed his skills and became a freelancer. Welcome to the world of Freelancing, an exciting career option today.

The online platform Upwork defines freelancing as "doing specific work for



working across various domains such as IT, graphic design, web development, data entry, and others. There are multiple reasons for you to prefer freelancing as a career option, such as flexible work hours, autonomy at work, and scope for earning more by working for multiple assignments simultaneously. What makes it interesting and different from regular jobs is the independent work location and schedule, the freedom to set your own rates for your work and not be bound by any long-term contracts.

India has an estimated 15 million freelancers

as companies seek to trim their overheads and supplement their existing workforce, freelancers are more important than ever. Some popular domains are web development and design, graphic design and multimedia, content writing and publication, digital marketing, web and mobile app development, data entry, consulting and coaching, translation and localisation, video and audio production, home and office solutions, IT and networking and so on. If you want to freelance, look at popular online platforms like Upwork, Freelancer, Fiverr, Craigslist and many more that connect you with individuals or businesses who can

then hire you for projects.

Scope for growth

There are certain qualities and skills that will help you succeed as a freelancer. One is updating your skills in your area of expertise. Do online courses, attend workshops, earn certifications from recognised platforms or institutes and get mentored by industry experts. Another important step is to build an online presence. A professional website and active social media profiles will help improve your visibility and popularity. Remember that it takes time to grow if you are new to this career option. Patience and persistence are key.

The good news is that

freelancing in India is growing quickly, as the nation is pushing the gig economy. Factors such as robust digitisation initiatives, strong government support for gig workers, numerous online platforms for freelancers, and special tax benefits for freelancers are making it an attractive career option. However, success is determined by one's skills and abilities in improving and popularising themselves.

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