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EDUCATION NEWSLETTER

September 2023

IN THIS NEWSLETTER

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Career Guidance - Moving in the Right Direction

Every year over 2.5 lakh students in the age group 16-18 years move to Kota to prepare for competitive exams such as the Joint Entrance Exam and NEET for admission to engineering and medical colleges respectively. These aspirants carry with them the burden of their parents' expectations and then they are loaded with packed schedules, cut-throat competition, and constant pressure to score well. This year, Kota witnessed the highest number of student suicides in the last eight years, 23 according to an Indian Express article. Students often are unable to communicate their concerns about constant pressure and loneliness with their parents, and this becomes a huge contributing factor of stress and anxiety among students.
What would be important for students in Grade 10 to select their choice of subjects for Grade 11 and 12 and for Grade 12 students as they prepare themselves for admission in higher education institutions? Let's take a step back and examine the narrative that has emerged over decades which is critical in shaping career choices.

Choosing a Career

From an early age, students are conditioned to believe that success can only be achieved by pursuing a particular course. Students often fail to make the right career choice because they are under constant pressure from parental expectations, peer group influence, insufficient guidance, social acceptance, and lack of awareness among many others which subconsciously shape their decisions, behaviour, and aspirations. Other aspects that could be a hindrance are stereotyped career choices for boys and girls and lack of equal opportunities as all students may not have access to subjects and infrastructure in their schools at grades 9-12. These factors surely limit their choices.

Students today have an ever-expanding list of careers to choose from, which includes many non-traditional multi-disciplinary career choices that were unheard of as recently as a few years ago. Despite this, career expectations have changed little over the past two decades, and in fact, have become more concentrated. As per the Programme for International Student Assessment (PISA) 2018 data, 50% of teenagers plan on working in just 10 occupations such as medicine, law, teaching, engineering etc. and that career aspirations are heavily influenced by socio-economic status and gender. The analysis also shows that 39% of the jobs listed by PISA participants are at risk of being automated within the next 10 to 15 years, highlighting the lack of job realism among teenagers.

The latest All India Survey on Higher Education (AISHE) 2020-21 also shows that women outnumber men in enrolment in undergraduate Arts degrees (52%) but remain under-represented in Engineering and Technology programmes (29%). Additionally, there appears to be a significant gap between academic achievement and career-relevant abilities, including communication, time management, critical thinking and problem-solving.

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Career Guidance-Moving in the Right Direction

A study published in the Asian Journal of University Education (AJUE) in October 2021 talks about the impact of exposure to career exploration leading to higher career self-efficacy and career maturity in students. This study found that developing career maturity with a focus on students' career decision-making self-efficacy with an emphasis on career goal selection and career planning in higher education played an important role in enhancing their overall career adaptability and preparing them for future career success.

So, it becomes of utmost importance that career choices are made based on the aptitude, personality, skills, interests, and workstyle orientation of the students. Career guidance is all about making the students aware of their strengths and weaknesses, and providing the right information so that they can explore their options and decide the right career for themselves. It is also about having an open conversation, addressing their doubts without any bias and finally guiding them at every step towards their career goal once they have made their decisions.

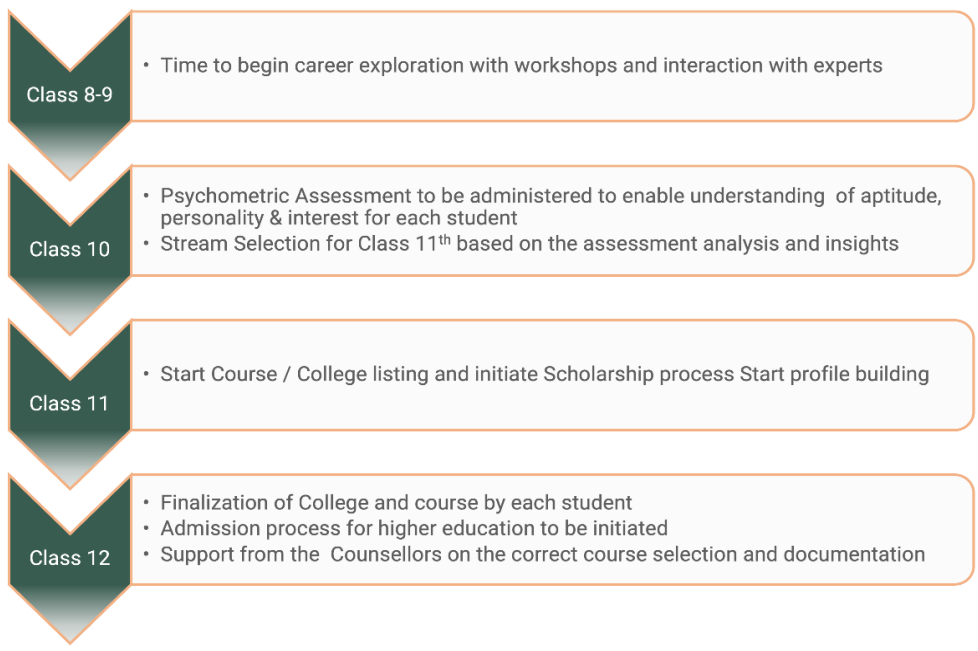
NEP 2020 and the role of schools in career guidance

NEP recognizes the role of career guidance in empowering students to make informed choices about their future paths, regardless of their socio-economic background or geographic location. To effectively implement career guidance in schools, the NEP offers specific recommendations. Firstly, it suggests providing opportunities such as career fairs, webinars and internships so that students can explore their interests. Secondly, it emphasizes on developing essential 21st century skills such as critical thinking, problem-solving, and communication. Lastly, providing comprehensive information about various careers, including required skills, qualifications, salary prospects, and work environments to the parents and students for them to make informed decisions.

The way forward

India has one counsellor for every 50,000 students as compared to the US where there is 1 counsellor for every 492 students. The distribution of these counsellors is also lopsided: Schools in tier 1 cities and those affiliated with the International Baccalaureate board are more likely to have a counsellor than those in tier 2 and 3 cities and affiliated with the state board. With the world of work changing so quickly, it becomes necessary for schools to look afresh and play an important role in the successful implementation of guidance programs in the school ecosystem as recommended by NEP 2020. This would help prepare students to navigate their career journey in a comprehensive manner.

- A formal policy, guideline and training program should be formed to train the potential candidates to become counsellors as well as provide them with various platforms to get employed and measure the standard of delivery.
- Schools to appoint qualified career counsellors and schedule regular interactions with students of grades 8-12 on careers and their aspirations. Alternatively, schools can get a cohort of teachers certified to be career counsellors as defined by the policy guidelines.
- Plan structured career guidance sessions from Class 8 onwards. This will enable students to make informed decisions about subject and stream selection, leading to better career choices.
- Schools must also encourage profile-building activities like collaboration with industry for student internships, job shadowing, webinars, and alumni interactions giving students exposure to careers through both academic and vocational education.
- Schools should also support students from diverse backgrounds, including marginalized communities by collaborating with community organizations to offer support and training teachers to be sensitive to the needs of these students.



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Career Guidance-Moving in the Right Direction

Use of technology

Offering one-to-one career guidance is not a scalable option. The use of generative AI to scale up the guidance practice and backing it up with an evidence-based assessment of its effectiveness will be the turning point. Chatbots have the potential to revolutionise career guidance and offer personalised advice at the point of need,24/7. Chatbots can provide information on requested career areas and also nudge students to consider alternative options for career areas they might not have considered. Additional resources such as recorded employer podcasts or career events can also be made available through these chatbots. There are many career chatbots around, such as Denmark's government-funded guidance chatbot and India Literacy Project's WhatsApp-based Career Guidance Chatbot. Governments like Australia and Singapore have set up digital platforms to assist students with mapping career trajectories based on their skills and interests, and labour market information. In Egypt, career guidance centres help young people to access training linked to skills in demand. Users can also access job search clubs, where they are provided with training in job searching and making job applications. In the private sphere, several tech start-ups have emerged in the space in India: from Mindler and iDreamCareer which leverage technology to minimise human bias in career decision-making to ProTeen which offers online career demos to students.

The way forward

Career development is a lifelong continuous process, and it is fundamental that students are presented with choices about continuing education and training to upskill and reskill. Career guidance serves four broad purposes: it helps reduce teenage uncertainty about career ambitions, directs students towards realistic careers (both in terms of labour market relevance/futureproofing and alignment with student abilities), defines the educational pathway to that career; and reduces informational and perception barriers that students from disadvantaged backgrounds face in career choices. On the other hand, generative AI interventions can play a crucial role in career guidance, transforming the way individuals explore career options, receive guidance, and make informed decisions. However, there needs to be a balance between technology and the human element in career guidance to provide empathy, understanding, emotional support, and nuanced guidance that technology cannot offer. Such a combination of technology and human expertise will surely yield the best results allowing for personalized guidance.

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[1] https://files.eric.ed.gov/fulltext/EJ1328494.pdf
[1] iDreamCareer. *Bharat Career Aspirations Report*. 2023

02

Making the Youth Future Ready

What does making our youth 'future ready' mean? Is it jumping the whole hog to the seismic shift the AI world is creating? In our endeavor to align our youth to the changing job scene, are we putting human creativity, skills and intrinsic knowledge on the back burner? "The superlative for me will be Ms. Gandotra's Math class with AI as a toolkit!" A high schooler's comment at a discussion on how the kind of spark a good teacher adds to the learning experience – something that machines with all their accuracy gleaned from heaps of data can never ever replicate or imitate – got the brain ticking… Hmmm…Can a baker whose experience, intuition, and artistic touch contribute to creating flavours, textures, and designs in products be replicated by AI alone? What about gardeners and horticulturists and many other such professions? Can a machine ever replace the expertise of caring, understanding, problem-solving, and creating? AI can aid in tasks with automated water systems or plant health monitoring. AI can enhance and support professions by providing valuable tools, analysis, and data-driven insights, but replace them…? With this lens, let us understand India's position in the global landscape in the context of the shift AI and emerging digital technologies are bringing forth.
Let us understand what we are doing to make our youth 'future ready'. Is India ready to equip its population with the right future skills to embrace, use, and develop emerging technologies?

Understanding the potential for India in future skills

India's demography

What makes India a hub for outsourcing and AI research? Is it just the large pool of professionals in the field of technology…? Besides the skilled workforce, India offers a cost advantage compared to other countries like the United States and China, making it an attractive destination for AI research and development centres. Also, the growing startup culture makes it conducive for innovation and research. Another positive is the diverse population of our country that provides access to extensive and varied data sets, an important nugget for fine-tuning AI models.

Government's approach

The government, in its vision of inclusive growth (to make AI accessible to all citizens) and societal impact, has taken several initiatives. These include the establishment of the Ministry of Electronics and Information Technology (MeitY); the creation of an AI Task Force consisting of experts from academia, industry, and government; Atal Innovation Mission wherein the Atal Innovation Centres and Atal Incubation Centres have been launched to support innovative startups; and AI for ALL under which workshops and training on AI skills are provided. Focusing on the five key areas of agriculture, healthcare, education, smart cities, and transportation, both the NPAI (National Program on AI) and the Digital India programs seek to transform India into a digitally empowered society and harness AI for economic and societal growth. Besides these initiatives and programs, the government is investing in building a strong digital infrastructure, including high-speed Internet connectivity and data centres.

Making the youth future ready

India surging ahead

The Indian IT industry has pushed its boundaries and accomplished incredible feat. Digital transformation is becoming the norm across all industries. Over the last three decades, the IT sector has become a major contributor to economic growth. The following growth figures and statistics predicted reveal India's unfolding digital growth story in the 21st century:

The Indian IT/ITeS industry intends to hire 8-10 million people by the end of 2023 • 28 million new tech jobs will be created in India by 2025 • More than 75% of companies are looking to adopt big data, cloud computing and AI in the next 5 years.
Electric Vehicle, Drones: Generate 5 crore jobs by 2030; 49 % CAGR between 2022 and 2030.
Web 3.0: Tech systems moving to decentralized mode. 11% of global talent is in India and growing at 120%

Just like the government has been making significant efforts to leverage India's existing tech talent; let us look at the educational initiatives that are being taken to make our students future-ready.

Understanding how the schools in India are preparing a future ready youth

Indian educational institutions are focusing on incorporating future skills into their curriculum. The emerging digital skills plays a crucial role in preparing the youth for the rapidly changing job market. The National Education Policy (NEP) aims to integrate AI education in school curricula and promote interdisciplinary learning. The approaches of different countries and international boards towards AI and other future technologies can provide valuable insights. Some key areas from which we can learn:

Different countries' approach

- Emphasis on STEM education: countries like the US, China and South Korea; focus on Science, Technology, Engineering and Mathematics (STEM education) in schools. This helps in providing a strong foundation and thus equips students with relevant skills for the digital age.

- Early exposure to technology: Countries including the UK, Australia, South Korea, and Singapore are familiarizing students with technology from an early age for enhanced learning and collaboration within subject areas. This way skills like problem solving and critical thinking skills are inculcated.

- Collaboration between education and industry: to bridge the gap between theoretical knowledge and practical skills; countries like Germany and Switzerland have strong vocational training models. This model ensures that the youth gain relevant skills and increase employability.

- Focus on creativity and soft skills: While technical skills are important, countries like Finland, Sweden and Singapore emphasize the cultivation of creativity, critical thinking and social/ interpersonal skills. Schools in Sweden have reversed the decision by the National Agency for Education to make digital devices mandatory in preschools. The soft skills of creativity, lateral thinking and sound social behaviour developed at an early age are then a launching pad for the students to adapt to an ever–evolving digital tapestry.

- Lifelong learning and reskilling: given the rapid pace of technological advancements, continuous learning and thus constant reskilling are becoming an integral part of future skills programs.

Making the youth future ready

International school boards

- The design thinking and computational thinking from the IB (International Baccalaureate) perspective: The primary years of learning for ages 3 to 12 years; use the strategies of design and computational thinking through play and creativity, open-ended problems, finding patterns, collaborative work, use of puzzles, computer games, concept maps and flow charts, robotics and student selected problems to hone creativity, critical and problem-solving skills.

- Middle years (13 to 16 years) also through the use of iterative cycles of learning, collaborative projects, connecting design and computation, integrating programmable hardware technologies, use of programming environments and working with data; make the students ready with both soft skills and basic understanding of theory and applications of technology for high school (IBDP) digital curriculum.

Weaving of a robust future skills curriculum for schools in India: To create a robust future skills curriculum on AI and emerging digital technologies that include Machine Learning, Blockchain, Robotics, Data Analytics, Web 3.0, and AR/VR, some of the components to be woven in are:

Understand the ethical and social implications, and encourage collaborative and creative thinking

- Teach algorithmic thinking, logical reasoning, and problem-solving using programming.

- Encourage critical thinking and ethical decision-making in AI

- Encourage hands-on projects to develop skills in training and evaluating AI models, and thus develop problem-solving skills

- Mainstream the Future Skills curriculum as a core subject in grades 6 to 12. The end-of-school certification on the Future Skills subject is recognized both by industry and globally

- Instruction in a blended format that incorporates experts from renowned global institutions to impart lectures on a virtual platform. Create a cadre of Future Skills Experts for the purpose of teaching the subject; maintaining labs, training other teachers on technology-led learning

- Infrastructure building to support the implementation of the curriculum, establish dedicated labs equipped with necessary resources for practical hands–on projects, experiments and tinkering with the latest tools and technologies; and teacher training etc.

- Encourage teachers as users of AI to actively enhance tutoring systems through personalized student learning, adaptive assessments and more.

Conclusion

To conclude; India has the advantage of a large demographic dividend, with a young and dynamic population. This provides a great opportunity to develop a skilled workforce in the emerging digital technologies. Backed by the government's support and initiatives, the landscape is fertile to prepare the youth and make them future-ready. Introducing a robust curriculum in future skills in schools is a work in progress. CBSE and ICSE have introduced AI as a subject, as have the governments of Madhya Pradesh and Goa. States like Andhra Pradesh and Uttar Pradesh are ready to introduce the future skills curriculum in 2024 -25. Taking insights from countries adopting AI and future technologies and inputs from international boards; the educators are on the path of weaving a robust future skills fabric. Overall, the integration of AI and emerging digital technologies should be carried out with careful consideration of ethical factors and responsible utilization aiming to complement human skills and preserve expertise.

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03

Challenges and Initiatives in Improving Youth Employment through Skill Development in India

India’s ascent on the Global economic stage

India, is one of the world's fastest-growing economies and is poised to become the third-largest economy globally, surpassing Japan and Germany by 2028. With a population of over 1.3 billion people, we are the second-largest labour force in the world, trailing only behind China, with a staggering 476.6 million individuals according to the International Monetary Fund (IMF). Despite these promising economic indicators, India faces a pressing challenge – the employment prospects of its youth. While the employability rates of college students have shown improvement over the years, they remain below 50%, plummeting to as low as 30% for graduates in arts. A Reuters report from 2023 puts the urban unemployment rate in India as increased to 10.1% in December 2022 based on the data compiled by the Centre for Monitoring Indian Economy. A substantial number of Indian youths lack the skills necessary to meet employers' expectations, leading to concerning unemployment rates.

In 2022, the International Labor Organization (ILO) and the World Bank estimated India's youth unemployment rate at 23.22%. Shockingly, almost a quarter of Indians aged 15 to 24 were without jobs. The situation was further exacerbated by the COVID-19 pandemic, with India witnessing its highest unemployment rate of 30.6% in 2020.

One striking concern is the steep decline in female employment, plummeting to a mere 19% of the female population in 2021, based on data from the ILO Modelled Estimates and Projections database. These challenges underscore the need for comprehensive measures to enhance youth employment in India.

Education and Skill Development as the Key

Obstacles on the Path to Youth Employment

There are significant hurdles persist in India's quest to enhance youth employment and these challenges demand multifaceted solutions:

- Insufficient Quality Jobs: The scarcity of quality jobs can lead to high unemployment rates among educated youth. In 2017–18, India witnessed a 45-year high in the open unemployment rate, primarily affecting the youth aged 15–29 according to the Periodic Labour Force Survey (PLFS).
- Skills Mismatch: Many young people lack the skills demanded by the job market, creating a gap between their skills and employers' needs.
- Overdependence on Agriculture: Approximately 43% of jobs in India are in the agricultural sector, characterized by low productivity and seasonal employment. This imbalance poses an obstacle to diversifying the labour force.
- Inadequate Vocational Training and Education: The vocational training and education system in India inadequately prepares young people for the job market, which can result in a lack of employable skills.
- High Competition: Intense competition in the job market, exacerbated by a large youth population, makes securing employment a formidable challenge.
- Limited Access to Resources: Many young people, especially those from rural areas, face barriers such as limited access to quality education, training, and job opportunities.
- Informal Sector Employment: A significant portion of India's workforce is engaged in the informal sector, characterized by low wages and job insecurity.
- Demographic Pressures: India's large youth population exerts tremendous pressure on the job market, intensifying competition for employment opportunities.

Challenges and Initiatives in Improving Youth Employment through Skill Development in India

Government Initiatives and Schemes

The Government of India, alongside various State governments, has launched several initiatives to enhance skill development and employment opportunities for Indian youth. These programs target different demographics and strive for specific outcomes, including:

Pradhan Mantri Kaushal Vikas Yojana (PMKVY): Offering short-duration skill training and monetary rewards to boost industry and employability.

Skill India Mission: Aiming to train over 40 crore Indians in various industry-related jobs by 2022.

National Skill Development Corporation (NSDC): Catalysing the creation of large vocational institutions and providing funding for scalable vocational training initiatives.

Skill Impact Bond: Mobilizing private capital to fund skill training programs and improve employability.

Schemes related to Entrepreneurship: Programs like Pradhan Mantri 'YUVA' Yojana focus on promoting entrepreneurship among youth.

Other Schemes and Initiatives: Initiatives like Skill Loan Scheme, Indian Institute of Skills (IISs), and SANKALP play crucial roles in enhancing skill development.

As we delve into the intricate world of skill development implementation across various Indian states, a multitude of challenges come to the forefront. These challenges, each with its own unique character, collectively paint a complex picture of the landscape.

Firstly, the issue of insufficient training capacity looms large. It is disheartening to note that training often falls short in translating into secure job placements for trainees. This challenge underscores the need for more effective training programs that bridge the gap between skill acquisition and gainful employment.
Secondly, the limited participation of the private sector in skill development programs is a recurring theme. The absence of robust private sector involvement hampers the holistic growth of these initiatives, and it's imperative to find ways to encourage and engage private entities in this critical process.
Another hurdle that cannot be overlooked is the phenomenon of market failure stemming from imperfect information. Many individuals remain unaware of available job opportunities and the skill development programs designed to prepare them for these roles. Addressing this informational gap is crucial in ensuring that skill development efforts reach their intended beneficiaries.

Moreover, there exists a significant disconnect between traditional education and vocational training. The skills acquired through formal education often do not align with the practical skills demanded by the job market. Bridging this gap is pivotal in making education more relevant to employment needs. Centralization also poses challenges in skill development initiatives. When state governments have limited roles in planning and monitoring these programs, it can hinder adaptability and responsiveness to local needs. Empowering state governments to play a more active role can lead to more tailored and effective solutions. Lastly, the absence of micro-level studies on skill development is a noteworthy concern. Local contexts and specific skill requirements can vary significantly across regions. Conducting research at the local level is vital for designing programs that truly meet the needs of the communities they serve.
In navigating these intricate challenges, it becomes clear that the path to successful skill development implementation in India demands a nuanced and multifaceted approach. Addressing these challenges requires increasing training capacity, encouraging private sector participation, improving information dissemination, strengthening the link between education and vocational training, decentralizing skill development initiatives, and conducting micro-level studies. By addressing these obstacles head-on, we can pave the way for a more skilled and employable workforce, ultimately driving economic growth and prosperity across the nation.

In conclusion, India's journey towards becoming the world's third-largest economy is intertwined with its ability to harness the potential of its youth through skill development and employment initiatives. While challenges persist, the government's commitment to these programs, coupled with the resilience and determination of India's youth, holds the promise of a brighter future for the nation. By addressing the multifaceted challenges and continuing to invest in education and skill development, India can unlock the full potential of its demographic dividend, driving sustained economic growth and prosperity.

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RESPECT

for all and alternate viewpoints

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of thoughts and actions

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of our chosen subject to drive innovative and insightful solutions

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