Pankaj Muthe

Build a data-literate world

Integrating data literacy into the education system requires a multi-faceted approach that goes beyond traditional teaching methods

Do we still need data literacy in the age of AI? Yes, because it provides the foundational knowledge required to navigate data and leverage the capabilities of AI effectively. The World Economic Forum's The Future of Jobs Report 2023 finds that the job market for data-related roles is experiencing significant growth, with more than 75% of companies planning to adopt big data, cloud computing, and AI technologies in the next five years. Digital platforms, apps, e-commerce, and digital trade rank among the technologies most likely to be adopted, as most businesses plan to incorporate them into their operations.

Gap in application

Yet alarmingly, NASSCOM also reports a 51% gap between the demand and supply for AI/ML Big Data Analytics tech talent in India. While there is a keen interest in AI and cybersecurity, students often lack hands-on experience and practical knowledge. Bridging this gap between theoretical understanding and practical application is crucial and educators have to raise awareness of the data literacy skills gap. Here's what they can do to prepare students for careers that will rely on data skills:

Integrating data literacy into the education system requires a multi-faceted approach that goes beyond traditional teaching methods. One effective strategy is to in-

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corporate real-world data into lesson plans, allowing students to work with authentic data sets and gain practical experience in data analysis. For example, students could analyse data on climate change to understand its impact on the environment, or examine data on social media usage to explore trends in online behaviour.

Seamless integration

Another effective approach is to integrate data literacy seamlessly into existing subjects such as Maths, Science, and Social Studies for stu-

dents to grasp the relevance of data analysis across various contexts. For example, in Science, students could analyse data on population growth to understand the impact of human activity on the environment. In medical education, students can leverage patient data to prepare dashboards outlining a patient's case, thereby enhancing their practical understanding of data utilisation in their field. This enables students to derive insights from data and conduct meaningful analyses.

Educational institutions

must forge the right industry partnerships to better align students' learning with employers' needs to benefit both the business community and the education sector. Many companies offer online tools and certification programmes that can help facilitate structured learning pathways for students by offering a range of resources, including free software, and online training to equip students with the necessary skills for roles such as business analyst, data architect, data engineer and so on. The success of such programmes

can be measured not only by the number of students enrolled but also by their subsequent employment rates as well as their qualification and certification outcomes. Additionally, success can be gauged by the extent to which graduates contribute meaningfully to the workforce and how acquiring new-age skills enhances their professional profiles.

These initiatives, implemented across numerous universities and colleges globally including institutions in India such as IITs, IIMs, and National Institutes of Tech-

nology (NITs), underscore the commitment to preparing students for the data-driven world. Through strategic partnerships and robust academic programmes of tech companies, educational institutions can effectively bridge the gap between classroom learning and industry requirements

Constant learning

Educators must recognise that data literacy is not merely a skill that's nice to have but a necessity in preparing students for the future. By analysing student performance data, educators can identify areas for improvement and allocate resources effectively to address gaps in learning and empower students with the skills needed to progress into new roles emerging in an increasingly digital-first, data-driven world.

AI, and now generative AI, is rapidly taking over the way we work, giving more power to data than ever. The Data Literacy: The Upskilling Evolution report confirms that over 58% of employees believe that data literacy is crucial to stay relevant. The ability to work effectively with data from Gen AI cannot be acquired in a day. So what it means to be data literate is constantly changing and evolving with each technology innovation. But by making learning a deliberate and ongoing process, students must be equipped with the data skills needed to build a pipeline of talent for the data-driven world of work we find ourselves in.

The writer is the Senior Academic Programme Manager, Qlik-Asia Pacific

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OFF THE EDGE
Nandini Raman

Take time to explore

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

I am 22 and have completed B.A. (History, Public Administration and Political Science) with a gold medal in the latter two. I am preparing for my second attempt at the UPSC and pursuing a Master's in Public Administration through IGNOU. Should I opt for an MBA? Or look for further studies in Public Administration abroad? What other career options do I have? Nikhil

Dear Nikhil,
To make an informed decision on a career path that aligns with your interests, strengths, values, and long-term goals, explore, research, and reflect on the various options available. What type of work environment, role, and impact do you desire in your career? Seek guidance and advice from teachers, mentors, professors, and professionals from the fields. If you are committed to a career in Civil Services, focus on your UPSC preparation. With your brilliant academic achievements, you have a solid foundation. Would an MBA or studying abroad align with your long-term goals and aspirations? Evaluate the pros and cons based on your interests, goals, finances and future career prospects.

An MBA in Public Policy or Administration or General Management can provide you with a broader perspective and managerial skills required for leadership roles in the public sector, government jobs, corporates, NGOs, and international organisations. Pursuing a Master's or Ph.D. in Public Administration or related fields abroad will provide you with international exposure,

research opportunities, and specialised knowledge and enhance your career prospects in academia, research, policy-making, and international organisations. Other options include being a public policy analyst, an international relations specialist, a researcher or an academician or working in the non-profit/NGO Sector.

I am a UX designer with a PG diploma in Communication Management and M.A. Psychology from IGNOU. I would like to do an Executive Ph.D. in Bengaluru. What are my options? Manoj

Dear Manoj,
An Executive PhD will enhance your career prospects. Institutions in Bengaluru that offer Executive Ph.D. programmes are Indian Institute of Management-Bangalore (IIMB), Indian Institute of Science (IISc), Indian Institute of Information Technology-Bangalore (IIITB), Bengaluru University, Christ University, PES University, and Azim Premji University. Given your background in UX design, Communication Management, and Psychology, some PhD specialisations and research areas that you can consider are Human-Computer Interaction (HCI), User Experience Design and Evaluation, Psychology of Design and Communication, Digital Communication and Media Studies, Cognitive Psychology and Human Behaviour, Organisational Communication and

Leadership.

I am in Class 12 and wish to pursue CSE but also earn while in college. Are there any courses to be done? Any platforms that provide an opportunity? Jayamithra

Dear Jayamithra,
You can do your B.E., B.Tech. or B.Sc. in Computer Science or Engineering from a reputed institution. Also enhance your skills, knowledge, and employability skills by learning Programming Languages (Python, Java, C++, and JavaScript to build software applications, websites, and projects), Web Development, Mobile App Development, Data Science and Machine Learning, Cloud Computing and DevOps, Cybersecurity and Ethical Hacking. Also, work on developing skills such as communication, problem solving, critical thinking and project management. To earn while studying, look at opportunities in freelancing platforms (Upwork, Fiverr, Freelancer), part-time jobs or internships, campus placements and recruitment drives or on online communities and platforms (GitHub, Stack Overflow). Create a strong portfolio showcasing your skills, projects, and contributions to demonstrate your expertise, creativity, and problem-solving abilities to potential clients and employers. Network across events, tech meetups, workshops, and conferences in your city to connect with industry professionals, experts, and like-minded individuals, and explore job

opportunities, freelance projects, and collaboration opportunities.

I will complete B.E. in ECE but want to transition to being a fiction writer. I'm passionate about writing. How can I make this my career? Dinesh

Dear Dinesh,
Transitioning to being a fiction writer will require dedication, passion, hard work, continuous learning, networking, and strategic planning. Develop your writing skills and work on your portfolio to achieve some success and recognition as a fiction writer. Submit your short stories to literary magazines, newspapers and online platforms. Consider blogging to showcase your writing skills, share your stories, articles, and insights of your writing journey and connect with readers and followers.

Dedicate time every day to write, whether it is short stories, novels, articles, or other creative projects. Read extensively to explore different styles, techniques, and storytelling approaches. Enrol in programmes to enhance your writing skills, learn new techniques, and receive feedback from experienced writers and instructors.

Join online communities to connect with other writers, literary agents, and industry professionals to seek advice, guidance, and mentorship, and build relationships and connections. Also consider working part-time as a content writer, copywriter, editor, or freelance writer to earn while you build your portfolio and experience.

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

Nurture connections

Tips for students to develop resilience and combat loneliness

FREEPIK

Pinky Burman Roy

We've all experienced loneliness at some point. It's a universal human emotion that can manifest in various ways, often described as an "emptiness" or a "hollow feeling" that's difficult to explain in words.

As social creatures, humans thrive in relationships and communities. Prolonged loneliness can lead to depression, low motivation, and low self-esteem. Today, understanding and addressing loneliness is more crucial than ever, especially among students who navigate the demanding terrain of academia.

Causes
Due to its highly competitive nature, high-grade requirements, and entrance exams, the Indian education system is drowning students in loneliness, anxiety attacks, and depression.

Beyond academic pressures, students in prestigious institutes face a myriad challenges. Despite high aspirations, the intense competition and the success of their peers can

undermine their sense of achievement.

Moreover, the transition from home to campus life often engenders a sense of emptiness among many. However, by developing strong social skills, they can establish a supportive network of friends to mitigate the feelings of loneliness.

Additionally, the adjustment to a new routine can trigger various emotions, particularly when compounded by instances of bullying and abuse, which further exacerbate low self-esteem and contribute to depression.

Therefore, it is imperative to help students develop a sense of resilience, which can equip them to confront adversity with confidence.

Here are some steps that students can take to help them combat loneliness:

Build a support system: Cultivate meaningful

friendships and peer relationships that provide emotional support and companionship. Surround yourself with individuals who uplift and inspire you on your journey.

Volunteer: Volunteering is presented as a dual-purpose activity at this point. Not only does it serve the community but also offers a chance to connect with others who share your values and interests. Whether you choose to volunteer at a local charity, animal shelter, or community event, the act of giving back can foster a sense of purpose and belonging.

Stay active: Engage in physical activities that promote overall health and well-being. Regular exercise – walking, jogging, swimming, or participating in sports – releases endorphins that act as natural mood lifters. Physical activity also helps reduce stress and anxiety, improves focus and concentration, and overall cognitive function.

Engage with communities: Participate in online or in-person communities aligned with your interests and passions. Connect with like-

minded individuals through shared hobbies, events, and discussions to network and foster connections.

Establish a daily routine: This involves setting realistic, manageable and achievable goals and tasks tailored to individual capabilities and circumstances to accomplish each day. By breaking larger tasks into smaller, more manageable ones, individuals can maintain motivation and a sense of accomplishment.

Practise self-care: Nourish your body with nutritious food, adequate rest and sleep. Self-care activities such as meditation, journalling, and hobbies can promote relaxation and inner peace.

Harness technology: Leverage technology to bridge geographical distances and stay connected with loved ones through video calls and online platforms. Engage in webcasts and virtual communities to foster a sense of belonging and intellectual stimulation.

Virtual vacation: Explore destinations you've always wanted to visit by gathering information, watching videos, or participating in virtual tours. This not only provides a fun and immersive experience but also allows you to learn about different cultures, landscapes, and attractions from the comfort of your own home.

Seek professional help: If feelings of loneliness persist or become overwhelming, seek support from a mental health professional. Therapy and counselling can provide valuable insights and strategies to manage loneliness and enhance overall well-being.

Loneliness is a natural human experience that can be addressed through proactive measures and support systems to lead a fulfilling life enriched by meaningful relationships and experiences.

The writer is the Student Counsellor at Oakridge International School, Hyderabad

CAREER CUES
Richa Dwivedi Saklani

Shape your future

Fellowship programmes help students develop specialised skills and provide real-world experience that transforms academic knowledge into impactful action

Have you ever wondered what could set your resume apart? Enter the world of fellowships. A fellowship is like a supercharged scholarship that not only provides financial support but also opens doors to professional development, mentorship, and hands-on experiences.

Think of it as a prestigious programme designed to elevate your skills, connect you with industry leaders, and provide real-world experience that transforms academic knowledge into impactful action. Whether you're diving into research, honing specialised skills, or engaging in community projects, these opportunities can shape your future in remarkable ways.

Fellowship programmes connect you with peers, professionals, and thought leaders, leading to collaborations, job opportunities, and access to hidden career paths. International or intercultural fellowships expose you to diverse perspectives, making you adaptable and globally competent. Many fellowship programmes include leadership training, community engagement, or project management components, helping you develop crucial management skills and show ability to drive impact. They often come with financial support, allowing you to focus on your studies or projects without financial stress and demonstrate resourcefulness in securing competitive funding.

For UG students
Khorana Programme for Scholars: Offers students in Biotechnology or allied fields a research internship at leading U.S. universities, focusing on scientific collaboration, with benefits including travel, accommodation, and a stipend. For details, visit tinyurl.com/ywpvxnub

Mitacs Globalink Research Internship: Offers students in various disciplines a research internship at select universities and institutions in Canada, with benefits including a stipend, travel allowance, and accommodation.
For details, visit tinyurl.com/3hhtreuz

Indian Academy of Sciences (IAS) Summer Research Fellowship: Offers students in Science, Engineering, and Medicine a research internship under leading scientists and faculty across India, with benefits including a monthly stipend. For details, visit tinyurl.com/yx4us2wx

Google Summer of Code (GSoC): Offers students interested in open-source software development a coding internship with global open-source organisations, with benefits including a stipend based on project completion.
For details, visit tinyurl.com/3m692vbb

LAMP Fellowship: Offers graduates or final-year students the opportunity to work as legislative assistants to Members of Parliament, focusing on policy research, with benefits including a monthly stipend.
For details, visit prsindia.org/lamp

TATA Trusts Research Fellowship: Supports students in Sciences, Social Sciences, and Humanities who have innovative research projects with social impact. Includes the JN Tata Endowment Loan Scholarships for overseas higher studies, Tata Innovation Fellowships for promoting scientific innovation, and the Lady Meherbai D. Tata Education Trust Scholarship for women graduates in social work and education.
For details, visit tatatrusts.org and tinyurl.com/yc6fauh3

Ashoka University Young India Fellowship (YIF): A one-year multidisciplinary PG Diploma programme in Liberal Studies, it is open to recent graduates or final-year students from any discipline. Scholarships are available based on merit and need. For details, visit tinyurl.com/2awprxz4

Global Undergraduate Exchange Programme (Global UGRAD): Offers a semester-long academic and cultural exchange in the U.S. for students in any discipline, covering tuition, accommodation, travel, and a stipend.
For details, visit tinyurl.com/3na2bp4f

Prime Minister's Research Fellowship: Final-year students with an interest in pursuing a Ph.D. can explore research opportunities at select IITs and IISc with fellowships of up to ₹80,000 a month.
For details, pmrf.in

Inlaks Shivdasani Foundation Scholarship: Students with exemplary talent in arts, music, and design can receive funding for their UG or PG studies at prestigious institutions worldwide. Covers tuition fees and living expenses.
For details, visit tinyurl.com/4ty72wkj

Teach for India Fellowship: Open to graduates or final-year students for a two-year teaching and leadership development programme in under-resourced schools with a monthly stipend.
For details, visit teachforindia.org

Acumen Fellowship: Offers recent graduates or professionals passionate about social impact a year-long leadership development programme alongside global social innovators. For details, visit tinyurl.com/yc7e9ey3

Ankur Capital Fellowship: A six-month fellowship focused on venture capital, impact investing, and entrepreneurship in the agritech and healthtech sectors. Offers a monthly stipend, training, and access to Ankur Capital's network.
For details, visit ankurcapital.com

With inputs from Anjana Anand

Ayush Bansal

In a world where technology appears to be taking over our lives, it is no wonder that Artificial Intelligence (AI) is finding its way into the field of counselling, especially job counselling. However, it is critical to underscore the distinct value that human counsellors bring to the table and why their function is still irreplaceable.

The human factor

With AI entering the counselling process, a look at why human counsellors will stay important

Emotional connect
Human counsellors and Artificial Intelligence differ in their abilities to understand and empathise with an individual's emotional intricacies. While AI can analyse data and deliver logical answers, it lacks the emotional intelligence to comprehend the complexities of human emotions. There are two main reasons why human counsellors score over AI.

The first is the emotional connection. The human contact allows building a rapport and trust between the counsellor and the client. This leads to the expression of empathy, warmth and support. The second is touch, a non-verbal method of communication that allows counsellors to express empathy, reassurance and understanding. However, despite it being an effective technique, it must be used with caution. Before adding touch to their sessions, counsellors must set clear standards and acquire the patient's informed agreement. This is because attitudes to touch differ among cultures and individuals.

Pros and cons of AI
Of course the use of AI in counselling also offers certain benefits. One is the unparalleled accessibility and availability and removal of constraints such as geographical distance and limited resources. Second, AI can tailor the approach to each user's specific needs by using personalised interventions and feedback, increasing treatment efficacy, and establishing stronger ties between clients and counsellors. The anonymity of AI offers a sense of privacy and users may not have to worry about being judged or the stigma that sometimes accompanies face-to-face sessions. However, AI algorithms lack the empathy and human intuition required for effective counselling.

From chatbots to provide instant services to VR simulations for exposure treatment, AI has the potential to improve accessibility and efficacy of mental healthcare services. However, it should complement, not replace human counsellors.

While AI can effectively conduct everyday chores, provide basic knowledge, and assist in particular situations, it lacks the sensitivity and intuition that human counsellors bring to the process.

Benefits of counselling
Career counsellors give personalised assistance based on your specific interests, skills, and aspirations. They assist you in exploring several career alternatives and identifying pathways compatible with your abilities and goals. The use of examinations and talks help you get a better knowledge of yourself, including your values, personality characteristics, and preferences and make informed job selections. Counsellors also assist you in acquiring the abilities required to succeed in your chosen area, such as strengthening your communication skills, polishing your technical competence, or developing leadership traits. Professional counsellors provide encouragement, direction, and practical answers to assist you in overcoming obstacles and remaining focused on your goals.

Therefore, human counsellors will continue to play an essential role in career counselling even in the age of AI.
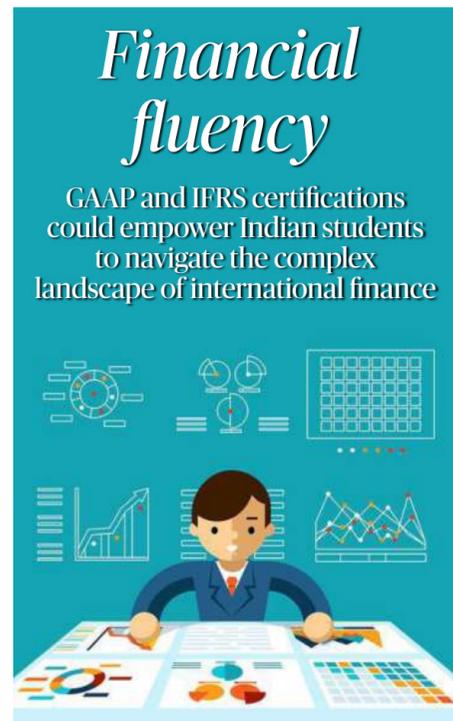

Pratham Barot

Imagine you are planning to explore many countries, each with different customs, language, food and culture. While the destinations may vary, a common understanding of certain rules and etiquette might help you navigate diverse cultures seamlessly. Similarly, as a young student, if you have decided to pursue a career in Accounting, certain credentials that are globally accepted will be beneficial when charting your career trajectory.

Among the most sought-after credentials are those related to Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standards (IFRS). These international frameworks play a crucial role in ensuring transparent and consistent financial reporting for businesses operating domestically and internationally.

GAAP refers to the set of accounting principles, standards, and procedures that guide the preparation of financial statements for companies in the U.S. The Financial Accounting Standards Board (FASB) establishes GAAP standards to regulate the accounting and reporting policies of public and private companies under U.S. jurisdiction. Compliance with GAAP is mandatory for publicly traded companies in the U.S.

IFRS stands for International Financial Reporting Standards, which provide a common global framework for financial reporting across more than 140 countries. The International Accounting Standards Board (IASB) issues these standards with the objective of transparency and global comparability of financial statements and disclosure. IFRS was established to streamline accounting practices for multinational corporations and cross-border investments.

Who can apply
Those who have completed a Bachelor's degree in Finance, Accounting or a relevant field and have some practical experience can apply for these certifications. In India, the two main institutes that offer IFRS certifications are the Institute of Chartered Accountants of India (ICAI) and the Institute of Cost and Works Accountants of India (ICWAI).

Various private professional bodies and training institutes, such as Certified Public Accountant (CPA) coaching centres or other education providers also offer GAAP and IFRS certification courses in collaboration with main certification bodies.

Benefits
Global recognition: GAAP and IFRS are internationally recognised accounting frameworks, making certified professionals highly valued across borders and industries.

Career opportunities: Certifications in GAAP and IFRS enhance job prospects in multinational corporations, accounting firms, and other organisations that operate globally or adhere to these standards.

Specialised knowledge: Financial reporting, taxation, auditing, and compliance... there are many key elements when it comes to financial knowledge and acumen. Both certifications help one develop the required skills for the financial world.

Competitive edge: The job market is tough already with a growing emphasis on global accounting standards, GAAP and IFRS certifications can help you gain a solid competitive advantage as an accounting professional.

As the world continues to evolve and business environments undergo rapid changes, mastering GAAP and IFRS is not merely a professional advantage but a necessity.

Financial fluency

GAAP and IFRS certifications could empower Indian students to navigate the complex landscape of international finance

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Saurabh Arora

As students from across the globe seek to pursue higher education opportunities abroad, the efficient handling of financial transactions becomes paramount. This intricate web of payments involves many stakeholders, including students, parents, educational institutions, financial entities, and service-providers.

Payment methods
According to the *Indian Student Mobility Report 2023-24*, the study abroad payments ecosystem includes several key categories of financial transactions such as tuition fees, visa fees, and accommodation costs. Other additional costs are living expenses, insurance premiums, exam and application fees. These are facilitated by an array of payment methods. Wire transfers are the most common means to transfer large sums internationally. Another option is to use credit or debit cards but these may incur foreign transaction fees.

A third way is digital wallets, which have become popular when it comes to smaller amounts.

Education loans offer direct payment from the financial institution to the educational institution, easing the burden on the student. Forex cards, preloaded with foreign currency, are useful to manage immediate expenses upon arrival.

Limitations
However, there are challenges involved in all. Regulatory complexities involve navigating the financial regulation of the home and host countries leading to intricate procedures to ensure compliance.

Technical issues such as payment delay and system downtime can disrupt the smooth flow of transactions.

Security concerns loom large with the international nature of transactions rendering them susceptible to fraud, scams, and data breaches.

Financial barriers such as high transaction fees and exchange rate fluctuations can also be a problem.

However, there are innovative solutions to these issues. Platforms such as EasyTransfer help streamline student payments by allowing to use local payment methods from their home countries, offering transparent and live market exchange rates. This encourages student choice and allows students to 'Pay Like a Local'.

Safety tips
However, students must exercise caution and safeguard themselves by using simple checks. Here are some tips:

Use tools such as Social Proof Scan that give authentic reviews, real-time testimonials, and community ratings to gauge trustworthiness.

Prioritise platforms with 'Fort Knox' payment setups fortified with SSL encryption, multi-factor authentication, and secure gateways. Consider Vetted Partnerships that align with reputable universities, trusted accommodations, and certified housing providers. Use secure international payment platforms such as EasyTransfer, PayPal or credit cards and steer clear of shady wire transfers or sketchy schemes.

An important aspect is to dive into platforms with a 'Terms and Trouble-read' approach, where one can scrutinise cancellation policies, refund terms, and dispute resolution frameworks. Also, ensure these platforms offer accessible customer support through multiple channels such as live chat, phone, or email for speedy issue resolution. Last, employ a Gut-Check Guideline. Trust your instincts; if it feels too good to be true or if red flags pop up, move away and explore safer options.

Navigate the web of finance

While there are platforms that help students manage their finances effectively, they should exercise caution and safeguard themselves

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