EDUCATIONPIUS

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Rishab Kapur

nvision a learning environment where students using VR headsets can virtually explore detailed structures of the human brain, moving through neural pathways and connections. This immersive experience is fascinating and emerging technologies like virtual reality (VR) and threedimensional (3D) visualisation are transforming education by making abstract ideas tangible. But, even with these developments, spatial literacy remains a crucial element that cannot be understated.

What is it?

Spatial literacy involves skills such as mental rotation, spatial visualisation, and understanding spatial relationships. These abilities are essential in a variety of professions, including engineering, design, architecture, data visualisation and more. With the introduction of VR and 3D visualisation, we observe an increase in spatial literacy's significance. Technologies that offer immersive learning environments may turn abstract ideas into concrete lessons and students understand difficult concepts better.

Numerous studies' and findings highlight how crucial spatial literacy is to education. A National Science Foundation survey claims that students who excel in STEM (Science, Technology, Engineering, and Mathematics) courses do better when they have great spatial skills. Additionally, a survey by the American Educational Re-



Navigating the future

Spatial literacy is a fundamental ability that students need to develop and India needs to integrate programmes into the educational curriculum

search Association found that 80% of teachers believe that incorporating 3D visualisation tools into the curriculum significantly improves students' spatial reasoning skills and understanding of the concept. Spatial literacy is a fundamental ability that enables us to interpret data and understand spatial aspects in our daily and professional lives.

Many countries such as the U.S., the U.K., Australia, Singapore and Finland already have spatial literacy programmes to ensure that every student can develop spatial skills for future success. However, some many educational institutions, especially in India, still rely predominantly on traditional teaching methods. It is becoming increasingly important to close this educational gap to guarantee that our students are suitably equipped with this knowledge.

Importance Spatial literacy plays a crucial role in STEM careers. Engineers require it to design complicated structures while scientists use it to understand geological patterns and molecular formation. Its impact in Maths can be seen in solving geometric problems and visualising data. In fields like Robotics and VR, developers use spatial knowledge to make engaging 3D environments. Robotics engineers take full advantage of spatial reasoning to design the robots in a more coordinated way. Besides this, spatial skills are required for data analysts, architects, urban planners and others.

Avoiding spatial literacy can bring significant risks, which will make it difficult for young minds to stay competitive in the digital world. These include:

Competitive Disadvantage: Students who lack spatial literacy will lag in the evolving global job market. They will struggle to get selected in a big organisation as spatial literacy helps in effective teamwork and efficient decision-making.

Impact on Cognitive Development: Lack of spatial literacy will limit problemsolving capabilities and hinder cognitive development leading to difficulties in understanding newer complex

Exclusion from Digital World: If individuals want to participate in the digital world, they need to develop spatial skills. Otherwise, they cannot understand newer technologies, which further will limit their capabilities to take advantage of those innovations.

Broader Social Implications: Limited knowledge of spatial reasoning can lead to decreased innovation and economic growth, as people will face problems in coping with quick technological changes leading to reduced productivity.

There are many ways in which spatial literacy can be integrated into education to simplify understanding of critical concepts. The concept also needs to be included in teacher training programmes and professional development modules. While the National Education Policy 2020 recommends the use of tools like AR and VR to teach, implementation remains a challenge.

In the future, constant advances in technology will make spatial technologies more accessible and crucial in our daily lives. So, educators, policymakers, and stakeholders must take spatial learning seriously and ensure our students can develop these skills for a better and brighter future.

The writer is the Co-Founder and VP of Strategic Alliances, Edverse

SCHOLARSHIPS

NSP Top Class

Education Scheme for SC Students Eligibility: Open to Indian students from the SC category who have passed the Class 12 exam with at least 60% marks and have been admitted to a UG/ PG programmes. Annual family income should be less than ₹8 lakhs. **Rewards:** ₹86,000 in the first year and ₹41,000 for every subsequent year. **Application:** Online **Deadline:** October

AICTE-Saksham Scholarship Scheme Eligibility: Open to Indian nationals from a specially-abled category, with a benchmark disability of not less than 40% who are in the first or second year (through

lateral entry) of a

programme in an

AICTE-approved

degree/diploma

www.b4s.in/edge/

institution. Annual family income should be less than ₹8 lakhs. **Rewards:** ₹50,000 per annum **Application:** Online

Deadline: October www.b4s.in/edge/ ASDA1

AICTE Pragati

Scholarship for Girls Eligibility: Open to female Indian

nationals in the first year of a diploma or degree programme at an AICTE-approved institution or second year of a diploma or degree programme through lateral entry

AICTE-approved institution. Annual family income should be less than ₹8 lakhs. **Rewards:** ₹50,000 per annum **Application:** Online

Deadline: October www.b4s.in/edge/

ASSG1

Courtesy: buddy4study.com

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Discover your path

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



OFF THE EDGE Nandini Raman

My brother is in Class 10 and wants to take PCM for Class 11. He wants to go into the Merchant Navy. Is this a good option? What other careers can he consider? Anshika

Dear Anshika, It's essential to consider career options that align with one's interests, strengths, aspirations, goals, skills, personal circumstances, and market demand and make an informed decision. While the Merchant Navy is a good choice, let him gather information on the roles, positions, training programmes, educational requirements, certifications, licensing, working conditions, career progression, growth opportunities, and challenges and evaluate professional compatibility with the aspects mentioned earlier. Let him also research other options in diverse fields such as Engineering, Maths, Aviation, Aerospace, Automotive, Manufacturing, Construction, Infrastructure, Logistics, Supply Chain Operations, Management, Finance, Healthcare, Law, IT, Computer Science. e-Commerce, Cybersecurity, Gaming, Animation, Design, Architecture, Environmental Science, Agriculture, Marine Biology, oceanography, Geology and others that offer growth prospects and fit his

I am a final-year Civil **Engineering student** considering a Construction Management degree in the

scheme of things.

U.S. What are my opportunities if I proceed with this? What other

combines the technical

Construction Management

knowledge of Civil **Engineering with Business** and Management skills. This will enhance your ability to oversee and manage construction projects. You could become a project manager, a site manager, an estimator, a facilities manager, a real estate developer, a contract administrator, and a sustainability and green building specialist. You could also consider a Master's in Civil Engineering with a specialisation in structural engineering, geotechnical engineering, transportation engineering, or environmental engineering. An MBA or a Master's in Project Management, a Master's in Urban Planning or Urban Design, Construction **Engineering or Construction** Technology, or **Environmental Engineering** or Sustainable Construction are other options. Explore the paths available in **Construction Management** and related fields, and gather information about the roles, responsibilities, qualifications, skills, working conditions, opportunities, challenges, and other relevant aspects to gain

My daughter is in Class 12 (Science with Biology and Maths). She is also a sportsperson at the State and National levels. Will a **B.Sc.** in Sports Science be a good option for her? What is the scope of this in India and abroad? Huzefa

insights about compatibility

with your personality.

Dear Huzefa

A B.Sc. in Sports Science could be an excellent option for your daughter, given her background as a sportsperson at the State and National levels. The degree combines the principles of Biology, Physiology, Psychology, and Biomechanics with the practical aspects of sports training, nutrition, and performance analysis. It prepares students for careers in sports medicine, sports rehabilitation, athletic training, sports nutrition, sports psychology, coaching, and sports management. The scope in India and abroad is huge. She can be a sports physiotherapist, sports medicine physician, or sports rehabilitation specialist. Or work as an athletic trainer or strength and conditioning coach, get into Sports Nutrition, Sports Psychology, or into Coaching and Sports Management. She can also explore research and academia.

I have finished Class 12 (Maths with Computer Science). While I want to pursue CSE, my family is not well off. How and where can I find details of scholarships and financial assistance for students like me? Bharani

Dear Bharani,

Do a thorough research of available scholarships, grants, fellowships, financial aid organisations, and other forms of financial assistance available for students pursuing CSE programmes in India and abroad. Visit the official websites, portals, and platforms of government departments, ministries, agencies, boards, councils, and organisations responsible for higher education, technical education, science and technology, information

technology, and human resource development to gather detailed information. Search relevant resources and their criteria such as academic qualifications, state, region, country, institution, course, programme, minority group, religion, specialisation, and other factors. Create and maintain a profile on these search engines, platforms, and directories to receive personalised scholarship recommendations, notifications and regular updates. Some resources are Scholarship Portal (https://www.scholarship portal.com/), Buddy4Study (https://www.buddy4study. com/), Scholarship India (https://www.scholarships inindia.com/),

Scholarships.com (https://www.scholarships. com/), Fastweb (https://www.fastweb.com/), College Board's Scholarship Search (https://bigfuture. collegeboard.org/ scholarship-search), Ministry of Human Resource Development (https://mhrd.gov.in/), Department of Higher Education (https://www.education. gov.in/), University Grants Commission (UGC) (https://www.ugc.ac.in/), All India Council for Technical Education (AICTE) (https://www.aicte-india. org/), National Scholarships

(https://www.scholarships. gov.in/). Each state government also has its own scholarship portal.

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



Break the silence

Educational institutions must prioritise and protect the physical and emotional health of students

search (ICMR), 12-13% of In-

dian students suffer from

Rashmi Mittal

ducation is key to success and students are expected to excel in their studies. The level of competitiveness in cracking entrance exams of reputed universities has created extreme expectations. Several other factors, including peer pressure, social conventions, and the fear of failure, can lead students to experience mental stress and anxiety. Thus, there is a vital requirement to reduce this burden through strategies that prioritise and protect physical and emotional health. Universities play an important role in promoting these healthy viewpoints.

According to a survey conducted by the Indian Council of Medical Repsychological, emotional, and behavioural disorders. Evidently students face numerous mental health challenges at different stages of their educational journev. This is where educators and institutions can play a pivotal role in developing efficient strategies to help them cope. One way is to offer counselling and improve access to support groups. Here are some

failure: Normalise Educators can motivate students to accept failure as a normal part of the learning process. It teaches that setbacks provide chances for development and improvement while eliminating stress and

other approaches:

Counselling centre:

This provides a platform for students to discuss their thoughts and the problems faced. This helps them to understand their strengths and weakness, academic planning, clarify academic goals and so on.

Gamify study sessions: Transforming learning into a game may increase engagement and reduce stress. This requires encouraging students with aspects such as points, levels, and incentives.

Create organised study area: A dedicated and pleasant study area may improve attention and productivity. It reduces distractions and fosters a mental link between the environment and good study time.

Stress-busting events: Universities can organise events that will help stu-

dents relax and provide a much-needed break and manage their anxiety.

Harness technology for productivity: Students can be shown how to use technological tools to organise materials, manage time, and provide intelearning opportunities.

Peer support networks: A supportive network can provide motivation, share resources, offer emotional support and reduce the feeling of isolation during stressful times. Thus, universities can allow students' knowledge to be shared among peer support networks.

Celebrate progress: Recognising small achievements can help maintain motivation and provide a sense of accomplishment, even if the ultimate goal hasn't been reached yet.

Channelise energy positively: Positive thoughts not only encourage but also give the motivation to think out of the box. So students should be motivated to engage in activities like games, yoga, exercise and so on.

Additionally, educators and institutions can also raise awareness about mental health and motivate students to talk about their concerns freely and seek professional help if needed and organise periodic programmes. This will encourage students to adopt healthy lifestyles, which requires their engagement in multiple sec-

The writer is the Pro Chancellor.

SAVE THE DATE

Admissions and registrations Registrations for the Symbiosis Law Admission Test (SLAT) 2025 conducted by Symbiosis International Deemed University (SIU) have begun. The computer-based

test will be conducted on

December 13 and 15 and the

best score from the two will

be considered. **Deadline:** November 22 https://www.slat-test.org/

Amrita University will host the International Conference on Gender and Technology, co-sponsored by UNESCO and IEEE, to explore the intersection of gender and technology.

Dates: January 16 to 19, 2025 https://tinyurl.com/ybnyark8

In conjunction with the conference, the university will host the EmpowerAl Hackathon 2024 from December 16, 2024, to January 19, 2025. Details at https://tinyurl.com/4tttzmxw

HSBC India invites applications for the the India **Business Case Programme** 2024-2025.

Eligibility: All UG students in

their penultimate or final year from any stream. https://tinyurl.com/3j8se6k9

Education New Zealand Manapou ki te Ao (ENZ) invites students from Classes

9 to 12 to participate in a digital poster design competition on Innovating for a Sustainable Future. **Deadline:** October 6. https://tinyurl.com/3ver3k97

EDUCATIONPLUS



THINK Aruna Sankaranarayanan

ou're a student at a prestigious Liberal Arts college, majoring in Economics. The coursework excites you and you strive to be a diligent student. Soon after class, you head to your room and find your roommate crying over a poor grade. Though you had planned to meet your friends, you decide to comfort her. Later that evening, you chat and get into a giggling fit with your closest buddies. On the way back to your room, your mother texts about your younger brother needing help with a debate. Even as you ponder over when you'd find the time to call him, you spot a campus dog that you feed every day limping in pain.

Different facets

Student, confidant, friend, daughter, sister, animallover. Do you have multiple social identities and often find it hard to toggle and juggle them? Of course, the above list is not exhaustive, as you also may be an Indian, a woman, a feminist and an environmentalist. Some are explicitly chosen (like being an animal-lover) whereas you may be born is size.

into others (daughter or sister or Indian). Further, some aspects may be more "public and formal" (being a student) while others may be more casual and limited to your close circle (being a friend).

In an article in the online magazine *Psyche*, psychologist Anna Zinn writes that the environment we are in usually determines which identity is expressed. So, when you are in class, the "diligent student" identity may be the one on display. However, if you find that a friend is misty-eyed in the middle of the lecture, your "compassionate friend" identity may surface and overpower the former for a while.

Who

are you today?

Navigating and balancing multiple

identities can help you face life

with more resilience

Having multiple identities is what constitutes your "support network," says Zinn, and can help you face the pulls and tugs of life with more resilience. If you were to do poorly in your exams, your peers

and family may help you cope with the setback. Alternatively, if your parent falls seriously ill, you may seek support from your siblings, peers and professors.

Finding balance

While having multiple identities is valuable, it can also exact a cost, especially when one identity conflicts with another. You see yourself as a diligent student who preps ahead of time for your exams. However, your friends keep pinging to ask whether you'd like to join them at the mall/ movie/ for a meal. Being a funloving friend is also a key aspect of your identity but, when exams are round the corner, how do you handle identities that are at odds? At points like this, it's helpful to weigh the costs and benefits of your actions on each identity.

If you choose to stay home and study, you're more likely to excel in your exams. And, you are keen to get into a top-notch Master's programme thereafter. Should you decide to hang with your friends, they'd only be too happy. But if you don't, are they going to cut you out of

their lives? While a couple may make a snarky comment on what a nerd you are, your relationships with most of them are likely to stay intact.

So, for a while you may put your "fun-loving friend" identity on hold, while the "diligent student" in you asserts itself. To do this, Zinn recommends that you avoid triggers that activate the conflicting identity. Most importantly, put your phone on silent while you study or, better still, keep it in another room. The constant pings and updates of your friends hanging out together may dilute your resolve to study.

Further, you may want to dispense with certain identities altogether if they're harmful to your health and well-being. For example, many smokers enjoy the bonhomie while smoking together with colleagues or friends. To break the habit, Zinn recommends forging a new facet by identifying with "ex-smokers" instead.

The writer is the author of Zero Limits: Things Every 20-Something Should Know and blogs at www.arunasankaranarayanan.com

Step into style

With the right qualification and skills, one can build a dynamic and rewarding career in footwear design

<u>Ashish Srivastava</u>

ootwear is an essential commodity for everyone. With the demand for stylish, highquality and trendy footwear increasing - both in national and international markets - a career in footwear design is becoming important. Footwear has diverse categories: sportswear, fashionable, medical and so on. The industry has an expected Compound Annual Growth Rate (CAGR) of 4.85% (2024-2028) in India and is expected to employ millions in the years to come.

EducationCourses as

Courses available range from diploma and certificate programmes to undergraduate (UG) and postgraduate (PG) degrees. The institutes that offer programmes in India are:

Footwear Design and Development Institute (FDDI): is dedicated to footwear design and has multiple branches across India. It offers programmes such as B.Des. and M.Des. in Footwear Design and Production.

Central Footwear
Training Institute
(CFTI): Established in
1963, this institute operates under the Ministry of
MSME, Government of India, it provides certificate
and diploma programmes
in various aspects of footwear design.

National Institute Of Fashion Technology

(NIFT): provides specialised courses in accessory design, which includes footwear design, at the UG and PG levels.

Skills

While education in the field is important, an individual requires certain other qualities to succeed in this field.

Technical know-how: It is imperative to understand materials, production processes, and technical specifications.

Attention to detail: Precision in design and execution, coupled with a keen attention to aesthetics, colours, and shoe mould accuracy is crucial to produce high-quality, visually appealing, and functional footwear.

Careful consideration in design, material selection, pattern making, and production leads to comfortable and durable shoes that meet consumer needs.

Creativity: Thinking out of the box is key, as one needs to be able to imbibe new ideas and be creative.

Up to date: An awareness of the latest trends and consumer preferences is essential to create relevant designs.

Problem-solving: One should be able to find creative solutions to problems in production among others. Mass production can be challenging as multiple issues need to be managed and have to work in sync to produce quality results. The overall balance, along

with stakeholder management is key.

Communication: Effective communication gets brownie points everywhere, be it with manufacturers, clients or team members.

Opportunities

Once you've specialised in this vertical, various opportunities open up in the industry. Some of them include:

Footwear Designer: Creating designs that are trendy as well as a consumer's favourite Quality Controller: En-

suring that the final product meets quality standards.

Product Developer:

Product Developer: Taking care of the technical aspects, feasibility and manufacturing overview.

Merchandiser: Coordinating between multiple departments including sales and production to ensure that the product is on a par with market standards

Placement opportunities are widespread as these institutes have strong industry connections. Companies ranging from billion-dollar brands to direct-to-consumer players to large-scale manufacturers recruit footwear designers. The rise of e-comdigital and merce platforms has made this a dynamic and rewarding ca-

The writer is Vice President and Head of HR, Relaxo Footwears Lt

Koneru Lakshman Havish

oday, architecture is more than just following popular trends when it comes to creating commercial or residential structures. It has grown into a quest to redefine trends and use cutting-edge technology to improve people's experiences. As the demand for multifaceted constructions integrating residential, commercial, and other aspects increases, so does the complexity of structures. According to the Indian Brand Equity Foundation, the real estate and architecture sectors are projected to grow at a CAGR of 9.20% by 2028. In such a scenario, what makes a young architect stand out? His or her portfolio. A well-crafted professional portfolio demonstrates one's talent, creativity and design viewpoint. When putting together a portfolio, keep the following points in

Showcase best work: A portfolio should show-



Design showcase

A well-crafted professional portfolio demonstrates one's talent, creativity and design viewpoint. Here are some tips on how to put one together

case one's finest work and be indicative of the project or goal that the individual is attempting to attain. The aim is to show the quality of work and the value he/she brings to the interaction. Propose projects and designs that meet the client's requirements. Someone who is applying for an architecture course should have a portfolio that covers all the elements specified in the admission requirements.

Project description: Building an appealing portfolio entails not just exhibiting the best projects but also delivering an intriguing narrative about each one. Discuss the de-

sign concept, objectives, challenges encountered, strategies used to address them, inspiration for designs and how this meets client expectations.

Create a structure: Provide a consistent image of work that a potential employer can understand. While the layout depends on one's personal choice, it's not to cram pages with content. Emphasise quality rather than quantity. Unless a project demands it, stick to a white background. Demonstrate expertise with software programmes used to design and evaluate drawings and images and include it in the portfolio description to highlight it as part of your skills.

Digital portfolio: While a printed portfolio is acceptable, including a professional website in the arsenal serves as a virtual calling card. Ensure that it includes contact information, an email address and professional social media profiles and blog or YouTube channels, where you post renderings or discuss architecture-related insights.

Building a professional portfolio as an architect is a never-ending process. It is not a just a showcase of one's work but also an exploration of potential.

The writer is Vice President, KL Deemed to be University

Amitendra Kumar

he Common Law Admission Test (CLAT) is a crucial entrance exam that offers access to UG and PG programmes in Law across 25 National Law Universities (NLUs) and other Law colleges. As the competition intensifies, scoring well in CLAT becomes essential. While the exam encompasses various sections, excelling in General Knowledge (GK) can be your secret weapon to a high score.

The exam comprises five sections: English, Maths, Legal Reasoning, Logical Reasoning, and Knowledge. General Among these, the last, which includes Current Affairs (CA), accounts for 25% of the total exam. The GK section requires minimal time to answer, compared to other sections. You either know the answer or you don't, making it a straightforward way to secure marks.

Given the competition, even a single mark can make a significant difference in one's ranking and admission prospects. So here's how you can crack this section:

Before diving into preparation, it is crucial to analyse the syllabus and understand the key areas from which questions are typically asked. The GK section covers Current Affairs (national and interna-



GK holds the key

With more weightage and requiring less time, the General Knowledge section of the CLAT can be a secret weapon to get a high score

tional events, government policies, and important developments over the past year); Legal News (significant legal developments, landmark judgments, and new laws); Political Changes (updates on elections, political appointments and government initiatives); Economy (economic policies, market trends and financial news); Technology and Sports (Innovations, technological advances, and major sports events).

Preparation Past pane

Past papers: Going through the previous years' papers helps identify recurring themes and types of questions. Solving these papers, along with mock tests, will familiarise you with the exam format and enhance precision.

Be consistent: Consistency is key. Make it a habit to read newspapers, follow news portals, and stay informed about current events. Doing this every

day ensures that you accumulate knowledge over time, rather than cramming in the last minute. Maintain a register to organise key information and to revise effectively.

Mock tests: These should simulate the actual exam environment to help gauge preparedness and improve time management skills. Ensure you take both the full-length and subject-specific tests to identify strengths and weaknesses.

Study material: Selecting accurate and up-to-date material is critical. While an abundance of resources is available online and offline, prioritise those that align with the current exam pattern. Avoid out-dated material and focus on reliable sources that provide comprehensive coverage.

Avoid guesswork: Each correct answer gets one mark, while an incorrect answer means minus 0.25. If you are unsure about a question, leave it unanswered to avoid negative marking.

With thousands of aspirants competing for a limited number of seats, excelling in the GK section can give you a significant edge. By following these strategies and preparing in a dedicated manner, you can enhance your overall performance in CLAT.

The writer is Product Head, Career Launcher.

The Third Perspective Brave Expression in the Age of Intolerance Africa Brooke

Perspective: Brave Expression in the Age of Intolerance In an increasingly

■ The Third

divided and noisy world, how do we learn to communicate, connect and endure others' viewpoints so different to our own, from strangers to colleagues and those closest to us personally, the people we care about?How do we cultivate a culture of honest, but valuable conversation? Crucially, how do we build strength and confidence in our own voices and beliefs and find a route to brave expression in the modern age?

In this book, the author encourages the reader to break free from self-censoring and start a revolution for change.

Author: Africa Brooke
Publisher: Hachette
Price: ₹799

CM K