

EDUCATION PLUS

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K. Elango

Language teaching must be distinct from the teaching of subjects like Maths, Physics, or Economics. Yet, current practices rarely reflect any such distinction, especially at school level. Language syllabuses outline ambitious objectives and learning outcomes such as to enable learners to become fluent and flawless users and to empower them to be 'autonomous' by mastering the language. They also aim to equip them to employ the language effectively and naturally in both formal and informal contexts. However, at the initial stages (Levels 1 and 2), the basic objective is imparting foundational skills and, by level 3, learners are expected to have acquired the core linguistic skills: listening, speaking, reading, and writing (LSRW).

Reality today

However, the reality of today's teaching-learning ecosystem tells us a different story, raising certain poignant questions: If learners have acquired the basic skills, why do teachers continue to re-teach them at higher levels? Why aren't they letting learners expand on their own to refine the acquired skills? Isn't the classroom engagement actually stifling their cognitive development by overemphasising teacher-led instructions? Why do



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teachers, even at the advanced stages, read texts aloud and explicate them, instead of guiding learners to explore on their own? Shouldn't class time be devoted to acquainting learners with diverse reading texts and strategies to optimise their efforts?

To materialise the stat-

ed objectives of teaching-learning of English, overhauling of the curriculum is a necessity. The first two of LSRW are innate human abilities, while the other two are acquired skills with reading typically preceding writing. As literacy fundamentally begins with reading, it demands prioritised attention.

Instead of labelling classes generically as 'English', timetables should specify the skills being dealt with. Signalling the shift, on each day, a period should be earmarked for a particular skill. Of the five periods in a week, two should be dedicated for Reading, as it is the 'mother of all skills', and one each can be dedicated to Listening, Speaking and Writing.

Moreover, reading classes must break free from the dated teacher-centric models. Learners should actively engage in varied activities to turn the grandiose plan of learner-centric and learner-driven approaches a reality.

Adults in their 40s and 50s confess that they may have read about 500 books, mostly during their

school and college days. This establishes the criticality of student days, for what they were to become later in their lives. Reading, after all, is not just decoding but also involves comprehension, reflection and imagination, which enables them to be thinkers. So, to maximise their efforts, besides the text types, they must be introduced to strategies such as skimming, scanning, previewing, predicting, questioning, and inferring. Mastery of these will accelerate the reading of more books with less time. For slogans such as 'job-ready', 'future-ready', or prepare for 'non-existent jobs', reading skills are the true foundation. 'Read to lead, and lead to read' is the maxim.

As language is for communicative purposes, 'noisy classes' are the norm. So, the clichéd ideal of 'pin-drop silence' must be militated against. The censure of inability to acquire English is not owing to learners' incapacity, but systemic shortcomings. The question remains: Are we truly ready to handle English courses differently? Subjects can be learnt through textbooks, but language demands efforts beyond textbooks, beyond teacher and classroom. The more one reads, the better they become.

The writer is a retired Professor of English and Chief Executive Chair of the English Language Teachers' Association of India

SCHOLARSHIPS**Campus France Amba Dalmia Scholarship**

Eligibility: Open to female Indian citizens who are at least 18 years and have completed Class 12 or graduation and have applied for or secured admission in a French institution. Consistent and exemplary academic record is required and French language proficiency is optional.

Rewards: Monthly stipend and other benefits.

Application: Online

Deadline: June 20

www.b4s.in/edge/ADSW1

Aston University Ferguson Scholarship, the U.K.

Eligibility: Open to Indian citizens who hold a conditional or unconditional offer for a specified degree and have a 2:1 degree (or its equivalent), submit a strong personal statement with their course application and be classified as self-funded students.

Rewards: Up to £22,500

Application: Online

Deadline: June 30

www.b4s.in/edge/FSAU1

Kotak Junior Scholarship Programme

Eligibility: Students residing within the Mumbai Metropolitan Region (MMR) who scored overall 85% or above in Class 10 Board exams in 2025 and have secured admission for Class 11 in any stream in the Mumbai Metropolitan Region (MMR) with an annual family income of ₹320,000 or below.

Rewards: ₹3,500 per month

Application: Online

Deadline: June 30

www.b4s.in/edge/KJSP3

Courtesy: Buddy4study.com

+
ture camera moments, march together for causes, and just be. Many colleges in urban settings are just single multi-storied buildings with confined spaces. Students should be encouraged to bring their ideas to classrooms, form synergies, and adorn the classroom with multicultural diversity. Thus, classrooms must not be intimidating.

Flexibility matters

The onus of the attendance policy lies not on students alone but also on the university and faculty. While students must take charge of their learning to ensure their core fundamentals are built, universities should allow flexibility in attendance depending on the subject.

Uniformity in attendance requirement may be administratively convenient but lacks logic. Their time to innovate and come up with start-ups since they have time to interact with industry when others are confined to classrooms. While a great deal of learning happens on the job as an apprentice, students may often be caught in embarrassing situations when they discover a lack of clarity in fundamental theoretical building blocks. Students often fancy practical application and want to 'do' rather than study 'boring' theory. The huge amounts of digital content available online further discourages them from attending classes, as they feel they can easily pick up on concepts through YouTube.

Insights are obtained during discussions in the classroom and practical application. There should be a clear expression of rationale as to why we want to persuade young adults to be in the classrooms and then deliberate on how. University and college campuses must welcome young and free-spirited students to 'do' things, hangout with friends, cap-

The writer is Associate Professor and Associate Dean at the School of Economics and Public Policy, RV University in Bengaluru.

Think about the long term



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

I graduated in Chemical Engineering and am working in the IT sector. This job is people facing and involves a colossal amount of talking, which I find quite draining. I don't know what I am good at or where my interests lie. I'm thinking of doing an MBA or Master's in Data Analytics or Business Intelligence. Does this have any merit? Ebrahim

Dear Ebrahim,
Take some time off to introspect and identify what you enjoy doing. Meet a competent career counsellor and take an aptitude test and a personality assessment. Your Chemical engineering degree provides a strong foundation in analytical thinking, problem-solving, and quantitative skills and the IT experience has likely given you valuable technical skills and an understanding of technology. You now need a career that allows you to leverage your analytical skills without constant social interaction.

Data Analytics and Business Intelligence are viable, but cater to different career paths. Given your desire for less interaction and your analytical background, a Master's in Data Analytics or Business Intelligence seems most promising. However, before committing to this path, consider taking online courses or certifications to gauge your interest and aptitude. Also connect with professionals to gain insights into the field. Focus on developing your programming skills and

statistical knowledge. Create a portfolio of data analytics projects to showcase your skills and stay updated with the latest trends and technologies in data analytics and business intelligence.

What are the good courses and institutions for courses in Nature Studies, Ecology, Conservation, or Ornithology? Also what are the career options? Sushil

The University of Delhi, Banaras Hindu University (BHU), and Pondicherry University offer undergraduate and postgraduate degrees in Environmental Science, Ecology, and Botany/Zoology. The Wildlife Institute of India (WII) in Dehradun, offers various postgraduate courses and training programs in wildlife science, management, and conservation. The Indian Institute of Science (IISc), Bangalore offers advanced studies and research in ecology and environmental sciences. The Salim Ali Centre for Ornithology and Natural History (SACON), in Coimbatore, Tamil Nadu, is a premier institution for ornithological research and education. Platforms like Coursera, edX, Swayam and NPTEL offer online courses in ecology, conservation, and related fields.

Career options include conservation scientist or biologist, wildlife biologist, Ornithologist, environmental consultant, park ranger or Wildlife Manager, and environmental educator. There are also options in research and academia, ecotourism organisation and NGOs. All these involve

fieldwork, so be prepared for outdoor work in various conditions. A genuine passion for nature and conservation is crucial, as are strong research and analytical skills.

After B.Tech., I joined an MNC as designer manager, but the job leans towards oil and gas sector design. I want to get into an aeronautics or aerospace sector for which I have the required software skills. Should I look abroad for higher studies or join a related PSU? Fareed

Dear Fareed,
What are your long-term career aspirations? Your engineering degree, design manager experience and software skill are significant assets but this is a specialised field, and focused training is essential. Reputable universities overseas offer specialised Master's programmes in aerospace, aeronautical engineering, and related fields. But these can be expensive. Look for programmes that offer strong industry connections and research opportunities in the U.S. Canada, France, Germany, and the UK.

If you are interested in contributing to India's aerospace sector and prefer a stable career here, keep an eye on recruitment notifications from ISRO and HAL. These openings are highly competitive and have a rigorous admission process with exams and interviews. You could also consider a Master's degree abroad followed by a career in a PSU or private aerospace company in India or international companies that

have branches in India.

I am Class 12 (Computer Science stream). I am intrigued by Maths and Design and want to do Architecture. Does the field offer jobs and growth prospects? Ananya

Dear Ananya,
Architecture is a good choice for someone who is intrigued by both Maths and Design! It requires a strong foundation in Maths for structural calculations, spatial reasoning, and material estimations. It also demands creative design skills to develop aesthetically pleasing and functional spaces. Modern architecture increasingly incorporates technology, including CAD software, Building Information Modelling (BIM), and sustainable design principles.

Architecture offers diverse career paths in architectural firms (design, planning, construction), construction companies (project management), government agencies (urban planning, heritage preservation), real estate development (design and development), interior design firms, landscape architecture firms, teaching and research and so on. With experience and expertise, you can progress to senior roles, project management positions, or even start your own architectural firm. Specialisation in areas like sustainable design, urban planning, or heritage conservation can enhance your career prospects.

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 edplus.thehindu@gmail.com with the subject line Off the Edge



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In class or out of it?

Uniformity in attendance requirement may be administratively convenient but lacks logic.

Pushkarni Panchamukhi

Student engagement largely defines quality pedagogy in any classroom, even in a higher education setting. Critical-thinking skills, team work or collaborative learning is achievable in physical classrooms where professors create a conducive student-centric environment to facilitate learning. In most colleges and universities worldwide, therefore, there is an attendance policy that mandates students to be present to a minimum of 75-85% of classes. Defying this can lead to students becoming ineligible to either obtain the necessary credits or undergo assessments.

While there is virtue in the intent, the policy has become a covertly lethal one in private universities in India where learning dies a thousand deaths amid disinterested students and indifferent faculty. When students attend classes with the goal of required attendance, it becomes a drudgery for the faculty to keep them en-

gaged. Why do we need to persuade students, mostly adults now, to act in ways beneficial for them? Economics says a rational individual always tries to maximise his/her utility or satisfaction from consuming any good or service given its price. Are students in most Indian private universities – who pay quite high fees – irrational? Or is it because, unlike many American universities, they don't pay for their education themselves? Or because they don't perceive any utility in attending classes?

Showing up for class is a battle in itself for students, and achieving that magical 75% is a feat. Students have sued colleges and even shockingly ended their lives because attendance shortage did not allow them to take the assessments and progress to the next level.

Encouraging innovation
There are some institutions in India with a zero-attendance policy, implying no coercion on students. Students are said to utilise

their time to innovate and come up with start-ups since they have time to interact with industry when others are confined to classrooms. While a great deal of learning happens on the job as an apprentice, students may often be caught in embarrassing situations when they discover a lack of clarity in fundamental theoretical building blocks. Students often fancy practical application and want to 'do' rather than study 'boring' theory. The huge amounts of digital content available online further discourages them from attending classes, as they feel they can easily pick up on concepts through YouTube.

Insights are obtained during discussions in the classroom and practical application. There should be a clear expression of rationale as to why we want to persuade young adults to be in the classrooms and then deliberate on how. University and college campuses must welcome young and free-spirited students to 'do' things, hangout with friends, cap-



CAREER CUES
Richa Dwivedi Saklani

A student aces the Class 10 boards. Then comes Class 11 and, suddenly, the marks dip, confidence wavers, and motivation seems to vanish. In Class 12, the student rises from the ashes and fantastic predicted marks and board results return. Introducing The Great Indian Dip, a phenomenon that even foreign universities are aware of.

This is so common that students who avoid a big dip and whose marks show a steady trajectory get noticed by admission officers in universities across the world. Let's break down how students can be sup-

ported through this period to maintain a steady academic performance.

Why it happens
Academic leap: There is a huge jump in the syllabus from Class 10 to 11, which takes students by surprise. The courses become more conceptual particularly in Science and Maths heavy subjects. Students who could study at the last minute in Class 10 and score well will not be able to do so and be successful in Class 11.

Teaching shift: With one set of board exams out of the way, schools now expect more independent learning. Teachers no longer handhold kids with each chapter and the pace of study is fast. The expectation is that the student will keep up.

Structure change: Class 11 introduces new subjects, longer hours and coaching classes for most

Get over the dip

Why students see a fall in performance in Class 11 and how they can be helped to tide over it

students. That can vary from JEE, NEET, CLAT to SAT for those applying to foreign universities.

Lack of clear goals: Students feel they don't have any immediate high-stakes exams to focus on but forget that Class 11 marks are

shared with most universities. All private universities in India and all foreign ones expect you to include the Class 11 final marks.

Class 11 tends to be a high stress period for students. Cognitive and emotional developments affect their

motivation, sleep and, particularly, their attention spans. Many students go through an identity crisis, questioning their subject and career choices particularly those who struggle with new subjects. This tends to deepen the dip.

Tips for parents

- Do not scold, compare or push for more tuition
- Do not blame screen time or laziness
- Do not micromanage every moment
- Warn them about the dip and help them prepare to

not let it happen. If it does happen, assure them that they can recover.

- Help them develop a schedule that works for them and has enough time to study and to relax
- Try to have a weekly chat with them about how things are going, if they are facing any difficulties, whether academic or personal. Try to make it like a regular chat rather than pressure

• Watch for burnout or mental health signals. If they are working constantly and not taking enough breaks, that's also not a good sign

- Offer to help wherever needed. Sit with them while they are studying and do your own thing so that they're not alone and are accountable.
- Watch out for these red flags: major emotional withdrawal; repeated low scores and zero motiva-

tion. If these are constant, it may be time to seek outside help. Maybe the subjects are not working for them or they need counselling or further academic support.

Marks taking a hit in Class 11 is not a sign to panic. It's not failure; it's just a phase. This year teaches students how to switch from rote learning to independent thinking, how to balance many things at once and, most importantly, how to deal with failure. All skills that have no place on a report card but teach lifelong lessons. So take a breath, stay steady, and remember: one dip doesn't define the journey.

With inputs from Kritika Malhotra

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Healthcare's backbone

Apart from doctors and nurses, there are a range of career options in the medical sector

Mohammad Nizar

In the past, the healthcare workforce in hospitals was limited to a few key professionals: doctors for diagnosis, nurses for patient care, pharmacists for medication management, lab technicians for sample analysis, and X-ray technicians for imaging. But, with the rapid expansion of the sector, Allied Health Professionals (AHPs) form a crucial backbone of modern healthcare and cover a broad spectrum from emergency responders to rehabilitation experts. AHPs support doctors in diagnosis, treatment, and rehabilitation, with some being qualified to practice independently.

In India, the term AHP is used interchangeably with paramedical staff. Paramedics are just one subset of AHPs and are globally known as Emergency Medical Technicians (EMTs), who provide first aid and life-saving support at accident sites and in ambulances and specialise in emergency care, stabilising patients before hospital admission. Another subset

of AHPs are Critical Care Technicians (CCTs), who are also often confused with EMTs. However, the two are different. CCTs work in Intensive Care Units (ICUs), where they monitor patients using life-support equipment.

Apart from these two, there are other kinds of AHPs. These include rehabilitation therapists, diagnostic technicians for various departments, public health specialists and hospital administration. There are around 20 roles under the AHP umbrella.

Education and career

Post Class 12, there are diploma, UG, PG and Ph.D. programmes. Diploma programmes are mostly for two years, while UG programmes are typically of a four-year duration, with some being five years. Some degree courses allow lateral entry for diploma holders directly into the second year.

Paramedics primarily work in ambulances and emergency rooms. Other AHPs find employment in hospitals, clinics, laboratories, rehabilitation centres, and private practice. Some, like optometrists and audiologists,

may also work in manufacturing and retail sectors.

The curriculum, course duration, institutional approval and professional licensing are overseen by regulatory bodies. The Rehabilitation Council of India (RCI) is the regulatory body for speech therapists, audiologists, clinical psychologists, and prosthetics and orthotics professionals.

Since the National Commission for Allied and Healthcare Professions (NCAHP) – established by the Indian government in 2024 – is not yet fully operational, state paramedical councils continue to handle professional registration.

With a global shortage of professionals in fields like occupational therapy, speech therapy and audiology, there is a great need to fill gaps. However, some areas like perfusion therapists may have reached a saturation point. Therefore, students must study the field carefully while choosing their specialisation.

The writer is a career counsellor and senior resource person, Centre for Information and Guidance India. Email: nizarperuvad@gmail.com

Abhimanyu Saxena

With artificial intelligence (AI) disrupting every industry, education is no exception. AI is pushing the boundaries of what is possible in education by providing research assistance, offering individualised feedback, simplifying complex topics, and connecting students with mentoring opportunities. Here are five essential AI tools that students should explore to maximise their academic potential:

Productivity tools: AI-driven productivity tools can help students organise their study materials, improve communication, and manage their time more efficiently.

Tools like Microsoft Copilot, Notion, and Otter.ai assist in note-taking, transcription, and structuring research. They can also summarise key lecture points, convert spoken discussions into text, and generate well-organised study guides.

Students with disabilities also benefit from AI-powered accessibility features like speech-to-text and text-to-speech functionalities and AI-powered translation services that make education

The AI advantage

Five must-have AI tools for students



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more inclusive. By automating repetitive tasks, these tools allow students to focus on critical thinking and deeper learning.

Coding assistants: AI-powered coding assistants can be a game-changer for students in STEM fields, especially those studying Computer Science and Engineering. GitHub Copilot provides real-time code suggestions, helps debug errors, and explains complex coding concepts. Cursor allows developers to write code using natural language instructions, along with other features like autocomplete and chat query function. Co-

deum helps developers write code faster and more efficiently by providing features like intelligent code completion, code generation, and code explanation. Students can focus on innovation and problem-solving by reducing time spent on troubleshooting.

Multimodal tools: These enhance learning by processing and presenting information across multiple formats, such as text, audio, video, and images. Google's Gemini API enables students to interact with AI through voice commands, handwritten equations, and pictures, giving them access to a wealth of educational resources.

helping them tackle complex subjects like Mathematics and Physics.

Tutors and research assistants

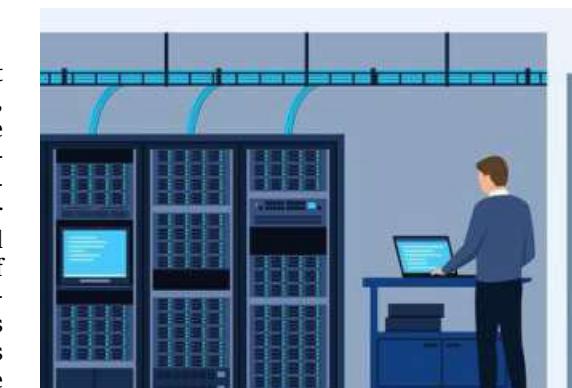
Students often face challenges understanding complex topics, conducting research, or preparing for exams. Tools such as Claude AI and AI-powered research assistants can help bridge these gaps by providing real-time explanations, summarising academic papers, and generating citations. These can create personalised study plans, track a student's progress, and offer tailored feedback based on individual learning styles. Research assistants make it easier to process large volumes of information by condensing complex topics into digestible summaries, helping students save time while ensuring a deeper understanding of their subjects.

Mentorship: AI-powered tools help students connect with the right mentors based on their interests, goals, and learning styles. These platforms provide personalised recommendations, track mentorship progress, and ensure a structured approach to skill development. By leveraging them, students can gain valuable career insights, receive academ-

ic guidance, and build meaningful professional relationships that help them transition smoothly into the workforce.

Ethical considerations: While AI has enormous potential to improve academic performance and learning efficiency, issues with accuracy, cognitive disengagement, and ethical implications must be addressed for successful application. The emphasis must be on guaranteeing fair, efficient, and responsible experiences in AI-enhanced learning environments. Students must use these tools judiciously as over-reliance on AI for assignments can hinder critical thinking, and misusing AI-generated content may compromise academic integrity. To truly benefit from this technology, these tools must be viewed as 'assistants' and not 'substitutes'. Additionally, AI-generated information must be thoroughly verified for accuracy and relevance. Striking a balance between digital learning and human interaction will be crucial to fostering well-rounded academic and personal growth.

The writer is the Co-founder of Scaler and InterviewBit.



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In every byte

Today's data centres are cutting-edge, dynamic ecosystems that demand a new breed of specialists for seamless operations

see a 20% CAGR by 2030. The key drivers are:

- Secure, real-time cloud storage for digital banking and fintech from the BFSI industry
- Increasing online transactions from the E-commerce and retail industry

Reports indicate that, by 2030, data centre stock will reach 3,400 MW across prominent cities. With new centres being established across tier-II and tier-III cities, what is simultaneously increasing is the demand for data centre specialists.

India's Data Protection Act 2023, the current push for Data Centre Parks, and the rise of sovereign cloud infrastructure for BFSI and government services will

new but also niche.

Cloud and Network Infrastructure Engineers: Design, deploy, and maintain scalable cloud-based solutions to ensure applications and systems function seamlessly on the cloud.

Cybersecurity and Compliance Specialists: Ensure a proactive approach in detecting network anomalies, vulnerabilities and loopholes and mitigating breaches.

Edge Computing Architects: Ensure faster data processing, reduced latency and seamless functioning of real-time applications and systems.

AI/ML and Automation Engineers: Harness the power of AI-driven auto-

mation systems for resource optimisation, security enhancements, predictive maintenance and more.

Sustainability Experts: Formulate effective strategies to minimise carbon footprints, water consumption to cool servers, renewable energy sources, and more.

Skills required

Cloud and virtualisation technologies: Expertise in cloud platforms such as Azure, AWS, and Google Cloud Platform (GCP), serverless computing, containerisation, Kubernetes and more.

Hardware and network infrastructure: Proficiency in SD-WAN, firewalls, intrusion detection

- **Data Analytics:** Proficiency in analytics and visualisation models
- **Cybersecurity, data governance and compliance:** Ensuring regulatory adherence (e.g., GDPR, India's DPA, PCI-DSS, and ISO 27001)

• **AI and automation:** With specialised skills in scripting on PowerShell, Python, and hands-on experience on automation tools like Terraform or Ansible; ML and RPA for predictive maintenance and efficiency.

Professional skills required include communication, problem-solving, creativity, critical thinking, project management, adaptability, continuous learning, and more.

Training programmes As a nascent industry, standardisation in terms of a proper academic route to gain exposure and expertise in data centre technologies is yet to be achieved.

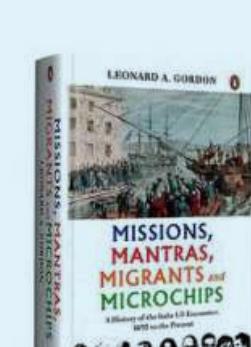
Since the skills required are highly specialised and multi-disciplinary, industry-focused training programmes are required to offer hands-on training in cloud computing, AI/ML, cybersecurity, or automation technologies.

Now would be the perfect time to work on developing capabilities in data centre technologies as the future is promising.

The writer is the CEO of Unext Learning.

ON THE SHELF

Missions, Mantras, Migrants and Microchips
From the 1780s onwards, Indo-American relationships were mediated through the British Raj until India's independence. While ties in the 18th and 19th centuries were somewhat thin, the closer tie through three-quarters of the 20th century has become an extremely close one, as India sent large rivers of people and goods to the U.S., and Americans have responded with growing interest and involvement in India. This, despite



occasional blips like the Bhopal industrial disaster. In *Missions, Mantras, Migrants and Microchips*, historian Leonard A. Gordon takes the long view of the Indo-US encounter. Besides documenting well-known ties, he also brings into focus some ignored and forgotten people like Kumar Goshal, Ida Scudder, Charles Page Perin, John Bissell and Maharishi Mahesh Yogi.

Author: Leonard A. Gordon

Publisher: Penguin

Price: ₹1299

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