The Next.World

Extending the horizons of education

SECURITY

COMMUNICATION

ATTENDANCE

ADMISSION

TRANSPORT

EXAMINATION

HOW TO ENCOURAGE CHILDREN TO ASK TOUGH QUESTIONS

SCHOOL MANAGEMENT:
SELECTIVE REMEDIES OR AN ALL-IN-ONE SOLUTION?

ERP

Scan to Read

EDITOR'S
Notes

SAMEER BORA

Sameer has over 18 years of experience spanning education, software technology, marketing and advertising. He specialises in K-12 education and product management, and is interested in the emerging trends of the education technology industry. He is currently the EVP of R&D at Next Education. He can be contacted at editor@nextworldmag.com

DIGITAL SCHOOL MANAGEMENT SYSTEMS TO FOSTER EDUCATION REVOLUTION

The education sector is on the brink of a technological revolution, borne on the wings of the realisation that the traditional methods — the chalk-and-talk mode of learning and the pen-and-paper administration — cannot meet the flexibility and diversity required in the 21st-century society. Managing various academic and administrative activities, such as admissions, examinations and fee payment, is a mammoth responsibility for any school. If principals and teachers spend their time buried under paperwork, how will they concentrate on more important things such as effective strategising for better teaching and learning? This is why an IT-enabled school management system is required for the all-round automation and better organisation of school procedures, including customisation of learning.

The National Policy on Information and Communication Technology (ICT) in School Education, 2012 states that such automated school management systems facilitate analytical modes of teaching and learning, leading to personalised remediation. The school information management system generates detailed reports on student and teacher performance, which help the school in taking appropriate measures. This helps schools in reviewing their performance against their goals, leading to transparency, accountability and credibility within the learning space.

School management software also improves communication and collaboration among K–12 stakeholders to augment the academic progress of students. Parents are kept abreast of the happenings in the school, especially with regard to their children's activities. This builds a strong relationship between the parents and the school, which is beneficial for the holistic development of the students. Additionally, feedback from parents and staff regarding any school procedure is recorded and analysed, so that the system itself can be customised to suit the changing requirements of the stakeholders.

Therefore, the aim of this issue of the magazine is to show how a school management software works towards scaling up the learning environment, thus creating progressive schools. Other topics of discussion include the reduction of focus on exams and homework in schools, and the significance of including sex education and mindfulness meditation process in the K–12 curricula. This, in turn, can help fulfil the tenets of true education in building an equitable and healthy learning community.

A Next. Education Initiative

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How to Encourage Children to Ask Tough Questions

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ENGAGING YOUNG MINDS:
A CHALLENGE

**FOR A CHILD, BEING HAPPY IS SYNONYMOUS WITH BEING ACTIVE.
IT IS ESSENTIAL TO UNDERSTAND THIS TO ENGAGE A CHILD PRODUCTIVELY.**

- PARUL CHAUDHRI

If we perceive the world from a child's perspective, it's no better than a prison. They are always told what to do, how to do it and when to do it.

Have you ever thought how it feels being a child? If we perceive the world from a child's perspective, it's no better than a prison. They are always told what to do, how to do it and when to do it. They can't choose their environment or the people they live with, but they are still very much open to exploring! For a child, being happy is synonymous with being active. Listed below are a few ways of engaging kids minds' productively.

PRETEND PLAY

Instead of making them do multiple activities in a single day, give your children opportunities to play on their own.

- You may promote their creativity by setting up a play kitchen, a building corner, and a dress-up area.

- You may even consider getting an indoor tent or rigging one yourself and allow them to explore their areas of interest. Kids like to play 'hide-and-seek' and even a bed sheet placed over a piece of furniture can become a hiding place for them.

- Make sure your child also gets some outdoor time and runs around the playground.

TAKE CUES FROM YOUR CHILD

"Feel free to join in your child's imaginative play, but follow their lead. If they are pretending to be a dog, you might say, 'I'm your friend, the elephant.' However, if they are not enjoying your company, move out. Some toddlers use dramatic play as a soothing tool and don't want anyone else's company," says Frances Stott, Ph.D., Professor Emeritus at the Erikson Institute Chicago, a graduate school specialising in child development.

BOOKS TICK THE IMAGINATION

Books are excellent fodder for your child's pretend play. Not only do they introduce them to new characters and situations, but they also teach him/her how a narrative is structured. Ask open-ended questions to your child when you read to them, such as 'how do you think the princess is feeling now?' or 'what do you think will happen next?' etc.

STOCK UP ON ART SUPPLIES

Drawing, painting, and sculpting are great ways to enter the make-believe world. Keep markers and paints within easy reach of children, and enable them to express their imagination through art. You may even write a story and have them illustrate it, or use clay to mould a figure that resembles their favourite character.

SCRIBBLING: HOW IT HELPS

Scribbling is essential for the development of hand-and-finger control, overall dexterity and for hand-eye coordination skills in children. It also encourages imagination and independent thinking skills. Scribbling basic shapes enables young learners to write and draw as a mode of communication. It also helps them communicate emotions that they might otherwise find difficult to express.

RHYMES: THE RHYTHM OF A CHILD'S LIFE

Sadly, today nursery rhymes are being relegated to the background because parents want their child to jump right into science- and maths-based learning activities. While some of these are undoubtedly important, the importance of rhymes for pre-primary children should not be underestimated. Phonological awareness is an important precursor to reading. Awareness of phonemes fosters a child's ability to hear and blend sounds, encode and decode words, and spell phonetically.

Rhyming skills make it easier for children to learn the sequences of letters, especially the sequences shared by rhyming words. It also enhances phonological sensitivity (rhyme and phoneme detection) in general, which, in turn, enhances reading skills. There is a powerful and lasting connection between a child's early knowledge of nursery rhymes and aspects of their

linguistic development later on.

STORIES CAN TEACH A LOT

Teachers can also use storytelling as a tool to effectively engage toddlers.

- **Instils Virtues in Your Child:**

  By narrating stories that convey a meaningful message or imparts a moral value, you can definitely inculcate qualities such as wisdom, courage, honesty, etc. from an early age in your little ones.

- **Enhances Verbal Proficiency:**

  This is also a great way to teach new words and pronunciation to children on a regular basis.

- **Improves Listening Skills:**

  Storytelling not only makes children more attentive but also enhances their listening and understanding skills.

- **Encourages Creativity and Imagination:**

  Listening to stories helps a child

> By narrating stories that convey a meaningful message or imparts a moral value, you can definitely inculcate qualities such as wisdom, courage, honesty, etc. from an early age in your little ones.

imagine the characters, places, plot etc., thereby enhancing creativity, making them more imaginative and open to ideas and free-thinking.

- **A Great Tool for Sharpening Memory:**

  Once you have read out the story, you can ask your child to repeat the same after a few days. This is a fun way to increase memory and improve concentration.

- **Broadens Horizon:**

  Through the medium of storytelling, you can make your child familiar with various places and cultures across the world. Try to include relevant stories from different countries and cultures to give your child a broader understanding of the world.

- **Makes Academic Learning Easier:**

Storytelling is a stepping stone in academic learning. Many children develop the habit of learning by rote without understanding the subject. Storytelling, as a regular activity, can help children enjoy the process of reading. This, in turn, helps them pick up subjects better. Sometimes, teaching school subjects in the form of an interesting story – for example, a history lesson – can help them understand better and fuel curiosity.

- **Better Communication:**

  Sometimes, children are hesitant to ask a question, even though the are extremely curious. Storytelling helps children in learning the art of asking questions. It also makes them more confident. Regular reading and listening can make them better orators too.

- **Helps To Face Difficult Situations With Ease:**

Stories about various characters facing difficult situations can help children to deal with similar situations in real-life.

Young children are usually keen observers and and are patient enough to enjoy every bit of any activity that they do. Our duty as parents is to ensure that any process is explained to them in a simple manner with proper actions/gestures. That's how they learn new words and meanings, and differentiate good habits from bad.

We should also give special emphasis on issues such as mental health, happiness, self-respect and love for others to ensure that a child has a happy and healthy childhood. Most importantly, take time to appreciate every single day with your children, have fun, laugh, play, and get involved with them. ■

PARUL CHAUDHRI
Pre-primary HOD at Sheoran International School

Besides designing pre-primary curriculum, she is also a motivational speaker and teacher trainer.

SCHOOL MANAGEMENT: SELECTIVE REMEDIES OR AN

ALL-IN-ONE SOLUTION?

SCHOOL MANAGEMENT BECOMES EASIER WITH ERP, AN INTEGRATED SOLUTION WHICH MANAGES ALL SCHOOL PROCESSES MORE EFFICIENTLY THAN MULTIPLE DISPARATE TOOLS.

- SAMEER BORA

It is a universally acknowledged truth that a school administrator's roster is always overloaded with duties. Consider a common scenario at the end of a school year: there are final results to be circulated, thousands of reports to be filled for the benefit of students and their parents, sorting out the details of the newly admitted students for the upcoming academic year, checking whether everything is in place for the new curriculum plan—all while ensuring that the common school

procedures such as fee collection, payroll, refurbishing of inventory and such run smoothly. On top of that, everything is done manually with piles of paperwork. And no matter how much time and human resources are deployed by the school, there is no guarantee that the work will be error-free.

Even managing everyday school operations throughout the year is taxing, simply because there are too many things to be done—ensuring student safety, giving parents detailed reports about student performance and conduct,

tracking the progress of curriculum and competency of teachers, managing examinations and so on. The administrators of the school are expected to be constantly on their toes and promptly act whenever required. Doing everything manually puts a lot of unnecessary burden on the staff and is quite expensive as well. This is why a robust, integrated school management software solution is required for the efficient administration of a school, for such software has evolved from being just a digital repository for student and staff information to a

centralised manager of all school operations.

DIGITISED SCHOOL MANAGEMENT: ENTERPRISE RESOURCE PLANNING (ERP) SOLUTION

In the highly competitive atmosphere of the 21st century, digitisation has helped us manage affairs in an organised way, saving time and effort. Digital tools are helping make business processes faster and school administration is no exception. School management has now become easy with the

A robust, integrated school management software solution is required for the efficient administration of a school, for such software has evolved from being just a digital repository for student and staff information to a centralised manager of all school operations.
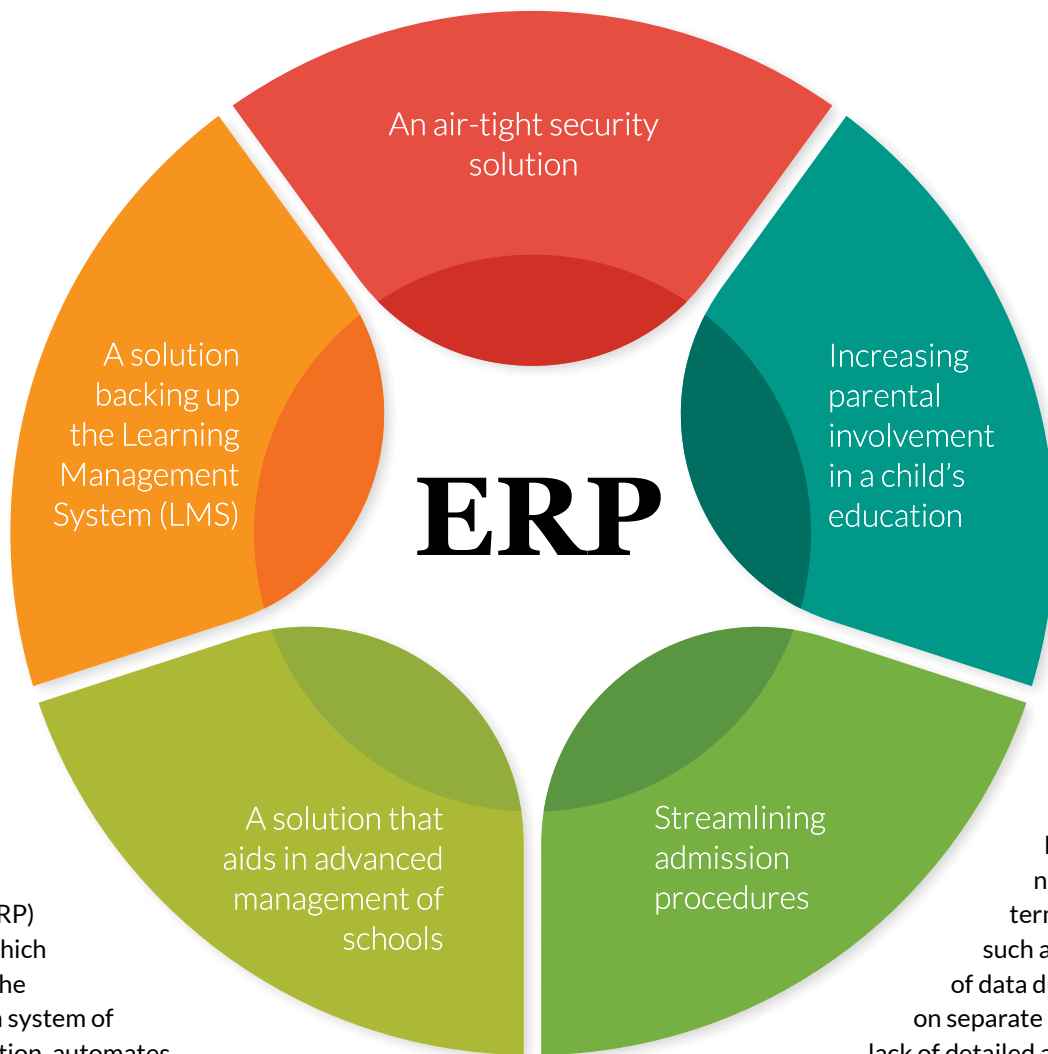
An air-tight security solution

A solution backing up the Learning Management System (LMS)

ERP

Increasing parental involvement in a child's education

A solution that aids in advanced management of schools

Streamlining admission procedures

Enterprise Resource Planning (ERP) software, which integrates the information system of an organisation, automates the key business procedures and provides detailed reports for the ease of analysis. It removes the redundancy of paperwork, where data needs numerous duplications, by ensuring that data is saved only once, and updated and reflected throughout the system.

The ERP manages mundane procedures such as fee collection, examination, admissions, visitor management, transport etc. and provides real-time communication between all the departments and stakeholders. This has been made easier by cloud computing technology, which increases

accessibility via the Internet, enables users to share and transfer data across various departments, and has better backup and disaster recovery plans from providers to reduce interruptions to the software. It also provides unlimited and secure storage of data, and makes it scalable via remote updation to cater to the changing requirements of the school.

ERP: FEATURES OR SOLUTION?

Schools often choose to use different software for each module, according to their requirements.

But they do not solve long-term problems such as redundancy of data duplication on separate platforms, lack of detailed and effective communication to parents etcetera. Investing in multiple tools is not easily affordable either.

In an interaction with Mr Manish Gupta, Head of Computer Science at B. K. Birla School, Pune, he talked about how the school has created their own digital solution for attendance, examination and library management. However, he feels that the school 'needs an ERP solution that intuitively integrates relevant departments, which helps the head of the school get a full report with a single click.' There have been several developments of the ERP in this direction:

Schools often choose to use different software for each module, according to their requirements. But they do not solve long-term problems.

An air-tight security solution: Schools need to ensure infallible security measures so that they can focus on education. While a school may have security camera surveillance, it does not provide detailed monitoring of the students' whereabouts, and therefore fails to assuage the parents' anxiety about their children.

With the help of GPS-tracking, it is easier to track all school vehicles. Parents and school staff can access real-time information about the children's journey to and from school, including driver details and statistics such as speed of the vehicle, upcoming stops etc. Furthermore, integration with biometric and RFID devices takes care of student attendance and helps track the location of the student. The ERP also provides stellar visitor management features with detailed planning of visitor entry, authenticating it via OTP or identification credentials, tracking personnel via CCTV and keeping an audit trail for each visitor. All these features come together to provide all-round security of a child during the school hours.

Increasing parental involvement in a child's education: Parents are most concerned about their children's academic development and would like to be as involved as possible. Yet, in the traditional system of schooling, parents' concerns are usually ignored. Parents are also usually busy with work and require details on mobile phones for easy access. An ERP makes sure that parents are aware of every little detail about their child's education – from progress reports and exam dates to regular notifications about fees payment and attendance. With the help of an ERP, teachers are able to send daily lesson plans and homework, so that they are notified about the course progress as well. Apart from this, parents can communicate their concerns to the school and parent-teacher discourse via the mobile ERP app can solve everyday concerns.

Streamlining admission procedures: The admission process is made hassle-free for both parents and the school by reducing paperwork and management of receipts from the various departments. All the parents have to do is fill up an online form and complete the online payment process. The rest of the process is taken care of by the software without taxing the school with endless paperwork. Parents do not have to visit the school repeatedly for their queries, for they can chat with the school authorities online. The school can also be relaxed as there is no fear of losing forms or other pertinent information since there are no messy spreadsheets to take care of.

A solution that aids in advanced management of schools: Once the basic school processes are streamlined, the school needs to make a good impression, which can lead to increased admissions. School websites are important in building better online presence and market credibility. An ERP helps in doing this with social media and Search Engine Optimisation (SEO) integration. It also integrates online admission procedures to ensure ease of access for potential applicants. An ERP helps a website be intuitive about providing access to visitors; for example, a parent should be able to see pictures of the entire class, whereas a casual visitor will be only able to see school photos approved by the school administration.

If an administrator owns several schools, it becomes difficult to keep track of the day-to-day operations via separate school management systems. However, with the institutional login apparatus, it is possible to see aggregate data across multiple schools via a single website.

A solution backing up the Learning Management System (LMS): The ERP-LMS integration, a relatively new development in the education sector, provides accurate evaluation and remediation via detailed,

Next Education's ERP software is an all-round school operations solution, that brings together all the processes, departments and the stakeholders for systematic and error-free management of school affairs.

system takes away the redundancy of entering data on separate platforms.

Next Education's ERP software is an all-around school operations solution, that brings together all the processes, departments and the stakeholders for systematic and error-free management of school affairs. It connects all the modules and shares a common interface facilitating seamless operations. With the help of Amazon Web Services cloud computing, it ensures data security; and integrates easily with Tally, the most preferred accounting software in India, to customise accounting methods. It ensures all school procedures are transparent with the help of effective communication and sharing reports among all the stakeholders as well.

reliable and easy-to-understand reports based on student data. For example, if a student does not perform well in an exam due to poor attendance issues, it will be easily tracked from the attendance data of ERP, thus aiding the teacher in understanding the actual reason behind the performance problem. Again, with the help of the communication feature, it is easier for the teachers to let parents know the details of a student's academic prowess. Moreover, an integrative

The ERP helps a school seamlessly integrate all its procedures, thus simplifying a school administrator's work from collecting and analysing data to managing the requirements of students and parents.

BENEFITS OF USING AN ERP SOLUTION

There are several advantages to using an ERP solution, apart from low costs, time-saving and data security:

Integration: The ERP helps a school seamlessly integrate all its procedures, thus simplifying a school administrator's work from collecting and analysing data to managing the requirements of students and parents. This helps in improved planning and reporting, as well as quick decision-making.

Finance and accounting: There is no doubt that ERP makes a school accountant's life easier. There are numerous kinds of fees paid by students several times a year and keeping track of salary increments of the staff can be a huge burden on the school. With the help of ERP, these processes are taken care of without any hassle. For example, if a student does not return a library book on time, the fine amount is automatically added to the fee payable in the next month. It also provides real-time information, which makes it easier to analyse the financial details and take necessary action.

Mobile functionality: Cloud-based ERP solutions provide remote access to its database and processes. In fact, such ERP systems give parents and administrators access to the software via their mobile devices. The enabling of real-time remote access to operations allows school administrators to synchronise their respective responsibilities from anywhere, anytime. Furthermore, it makes things easy for the parents as well, because they can pay fees or keep tabs on their children's locations via smartphone devices.

Human resource management (HRM): HRM has now become an important part of an ERP, which is very important for schools. Evaluating students cannot give a detailed picture of the strengths and weaknesses of the entire school ecosystem. It is important to evaluate the teachers' performance as well. HRM has moved beyond the basic processes such as payroll and attendance—now it includes recruitment, teacher performance and competency management, which enables the administrators and the teachers themselves to review their work and apply appropriate measures.

The functionality of the ERP has shifted from being a data storage software to a highly analytical tool for augmenting the various academic and administrative processes of the education sector. It is essential that all these processes communicate with each other for detailed reports and accurate decision-making. Schools often fear security breaches in cloud-based ERPs and prefer to use disparate onsite management tools, but such fears are unfounded due to the data security provided by cloud computing. Therefore, in order to cater to 21st-century educational strategies, using integrated ERP solutions in schools has become imperative. ■
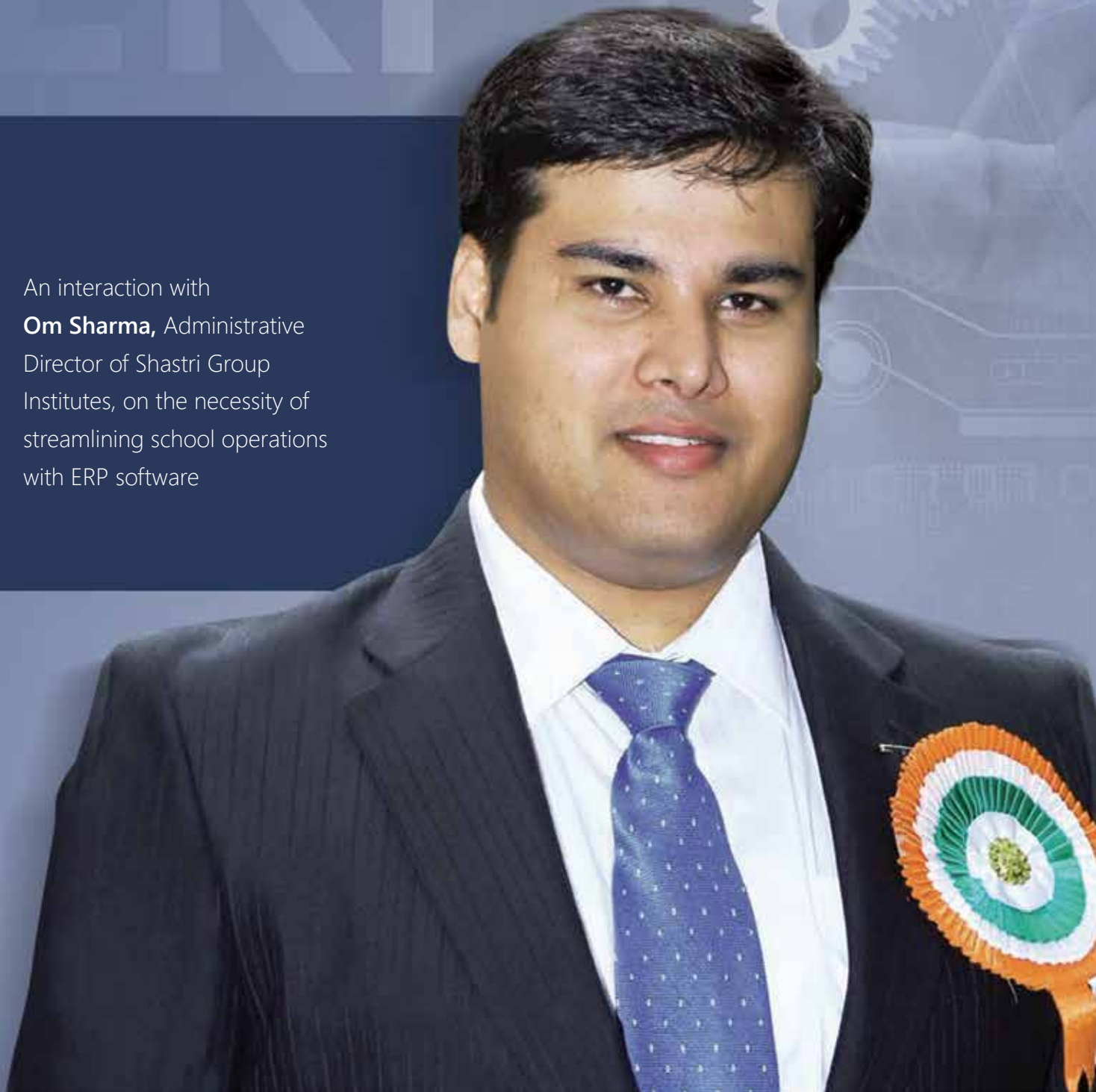

SAMEER BORA
Executive Vice President at Next Education

He has over 18 years of experience in education and IT, and specialises in K–12 education and product management.

An interaction with
Om Sharma, Administrative
Director of Shastri Group
Institutes, on the necessity of
streamlining school operations
with ERP software

IMPORTANCE OF AN INTEGRATED SCHOOL MANAGEMENT SOFTWARE

The Next World team: Are you using an ERP for managing your institutes?

Mr Sharma: Yes.

TNW team: Is it an integrated solution or does it have separate features for separate processes?

Mr Sharma: It is an integrated solution that connects all our institutes.

TNW team: Why did you choose an integrated ERP solution?

Mr Sharma: The main problem that we faced with separate systems is the lack of consolidated reports, which hindered the process of taking quick remedial measures. Now, we can monitor the progress of our institutions easily with the comprehensive graphical analysis provided by ERP. Keeping track of student and teacher performance, leave and attendance records, and even non-academic parameters such as finances and inventory, are now hassle-free because of centralised management.

TNW team: What are the other problems you have been able to address with the help of ERP?

Mr Sharma: ERP can make monitoring of students easier, effective and cost-friendly as well with the help of RFID cards tags, GPS trackers etc. It also ensures parents' involvement to the fullest, with active communication between them and the school. Admission procedures can be automated, which save time, efforts and resources.

TNW team: Schools use different software for each module according to their requirements. What are the problems of such implementations and how does the integrated ERP solution help resolve them?

Mr Sharma: Having separate software for different processes require the schools to enter student data on multiple platforms. Integrated modules help reduce data entry multiple times, thus saving time and effort. Changes

Cloud computing has made data safer with better backup and disaster recovery plans.

made on one module reflect throughout the system, which is helpful for the ever-changing requirements of a school. This helps in better planning and reporting in an error-free manner. Also, format conflicts can be eradicated.

TNW team: Schools choose not to go in for ERP due to the fear of security breaches or problems of customisation. Do you think such fears are unfounded, especially when ERP is cloud-based?

Well, such fear comes from bad

experiences and lack of confidence in the ERP providers. The requirements of schools are not met by most ERPs available in the market and additionally, they are quite difficult to use. You may doubt entrusting your data with an ERP provider. What happens in case of natural disasters, like the recent floods of Kerala?

These issues should be taken seriously. However, there are solutions to these problems. Cloud computing has made data safer with

better backup and disaster recovery plans. Additionally, there are many companies who sign agreements to not share and use data without the school's consent. So, why avoid ERP anymore?

TNW team: What are the challenges that a school faces in the implementation of an ERP and how can those be mitigated?

Mr Sharma: The biggest hurdle is data collection in the prescribed format. Training the staff to ensure optimum utilisation of ERP is a herculean task in itself, since they are usually not adept in ICT skills. It will also take them some time to reach the expected level.

Furthermore, we also need to make sure that the ERP provider delivers what they promise. In the whole process, the school management plays a key role along with the teaching and non-teaching staff, and the company implementation and training team. ■

The main problem that we faced with separate systems is the lack of consolidated reports, which hindered the process of taking quick remedial measures. Now, we can monitor the progress of our institutions easily with the comprehensive graphical analysis provided by ERP.

On the importance of automating library facilities with ERP

ERP makes it easier for the librarian to issue books and also to keep track of the books lent out with the help of features such as barcoding. ERP also provides a detailed report of library activities — the number of times a particular book was issued to the students, a list of the students who borrow books most frequently, etc.

Suresh M Velayudhan,
Principal of Sivagiri Vidyaniketan Senior Secondary School, Kochi

On cloud computing for K–12

The fact that it is accessible 24*7, helps when the server is down or there is no power. Also, we should always choose a secure server so that our valuable data is not compromised. If the server is safe and dependable, you don't have to worry about losing the data or the hard drive crashing.

Vinumoan K. Mathew,
Vice Principal of Gregorian Public School, Kochi

ERP keeps parents informed

ERP makes it easy to keep parents informed and updated. For instance, when it comes to unexpected holidays, we can inform them easily. Earlier, we used to contact few parents over the telephone and they used to pass on the message to others. Now, communication with parents has become easy and convenient.

Maya Sukumaran,
Principal of Gitanjali Senior School, Hyderabad

Augmenting parental involvement through ERP

"One of the greatest boons of implementing ERP is the involvement of parents in the day-to-day events of the school, and this connection is very important for an all-round upbringing of the children."

Meenal Dixit
Principal of Shreemant Shivajiraje English Medium School, Pune

On providing data security via ERP

"Data security and scalability are the foremost concerns of any school, and ERP provides that assurance via cloud computing technology."
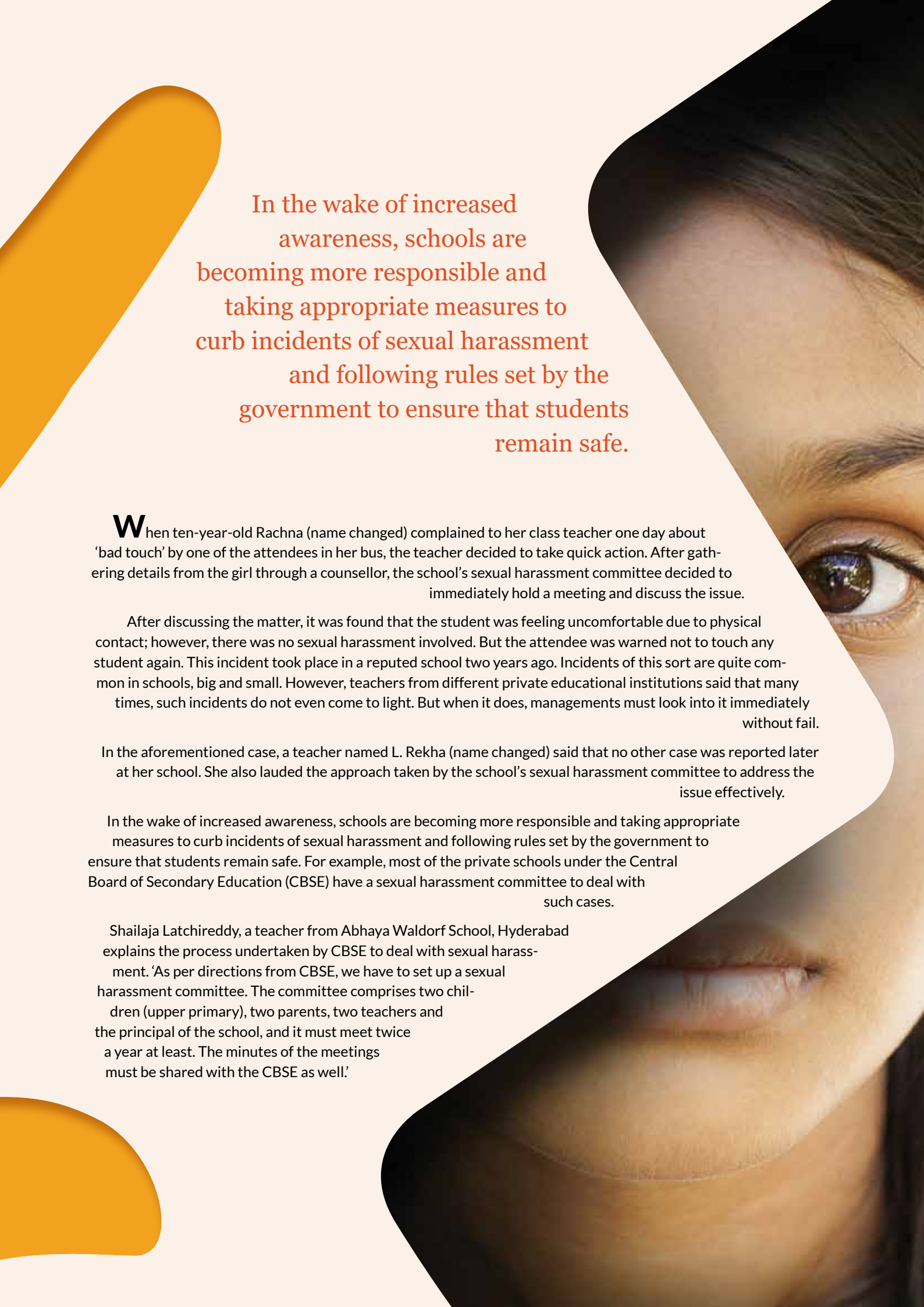
Sahil Adlakha
Director of St. Luke's Convent School, Gurgaon

HOW SCHOOLS ARE DEALING WITH

CASES OF SEXUAL CRIMES AGAINST STUDENTS

RATES OF SEXUAL OFFENCES IN SCHOOLS ARE ALARMING, BUT IT IS HEARTENING TO SEE THAT THE MANAGEMENTS ARE TAKING CONCERTED EFFORTS TO TACKLE THE ISSUE.

- YUNUS LASANI

In the wake of increased awareness, schools are becoming more responsible and taking appropriate measures to curb incidents of sexual harassment and following rules set by the government to ensure that students remain safe.

When ten-year-old Rachna (name changed) complained to her class teacher one day about 'bad touch' by one of the attendees in her bus, the teacher decided to take quick action. After gathering details from the girl through a counsellor, the school's sexual harassment committee decided to immediately hold a meeting and discuss the issue.

After discussing the matter, it was found that the student was feeling uncomfortable due to physical contact; however, there was no sexual harassment involved. But the attendee was warned not to touch any student again. This incident took place in a reputed school two years ago. Incidents of this sort are quite common in schools, big and small. However, teachers from different private educational institutions said that many times, such incidents do not even come to light. But when it does, managements must look into it immediately without fail.

In the aforementioned case, a teacher named L. Rekha (name changed) said that no other case was reported later at her school. She also lauded the approach taken by the school's sexual harassment committee to address the issue effectively.

In the wake of increased awareness, schools are becoming more responsible and taking appropriate measures to curb incidents of sexual harassment and following rules set by the government to ensure that students remain safe. For example, most of the private schools under the Central Board of Secondary Education (CBSE) have a sexual harassment committee to deal with such cases.

Shailaja Latchireddy, a teacher from Abhaya Waldorf School, Hyderabad explains the process undertaken by CBSE to deal with sexual harassment. 'As per directions from CBSE, we have to set up a sexual harassment committee. The committee comprises two children (upper primary), two parents, two teachers and the principal of the school, and it must meet twice a year at least. The minutes of the meetings must be shared with the CBSE as well.'

PREVENTION IS BETTER THAN CURE

One of the methods adopted by institutions to sensitise students nowadays is to explain to them about 'good touch' and 'bad touch'. Latchireddy adds that her school conducts talks regularly on this topic to create awareness. As part of sensitisation, even the staff in her school has been asked to hold children only from behind, or hold their hands or elbows in case a student get violent.

'We also have bus mentors now, who are upper primary students, and they inform the management if they see something that needs to be reported,' Latchireddy further stated. Officials from school managements said that helpers in buses are told how to behave with children and not have close physical contact with them.

Apart from the sexual harassment committees, school managements also take precautions with regard to male teachers and their behaviour towards students. Both Shailaja and Rekha stated that while it is considered acceptable for a lady teacher to hug a student, the same is not the case with men.

Some schools even ask the staff to keep a watch on students when they move around in groups. Another senior teacher from a private school, who did not want to be quoted, said that a case of sexual bullying of a junior male student at the hands of his seniors was found to be happening in the washroom. 'We usually don't send staff to check on students, but we learnt that the group was staying in the washroom for longer periods, so we sent an attender to see what was happening. After

learning about the incident, we sent the boys involved for counselling. So such things also happen, and usually parents don't come forward to tell us or they are not even aware of it,' she explained.

DEFIANCE IS RAMPANT

While there is no separate database for sexual harassment cases that take place against children in schools, those who commit sexual offences against children (under the age of 18) are booked under the Protection of Children from Sexual Offences Act, 2012. Data from the National Crime Records Bureau also shows that offences against children have been increasing marginally across the country.

Cases of sexual crimes against children*	Year
89,243	2014
94,172	2015
1,06,958	2016

*As per reports published by the National Crime Records Bureau

Sensitising both teaching and non-teaching staff, having an open approach towards discussing any untoward incidents etc. are some ways in which such offences can be addressed. A safe and secure environment at school is imperative to improve teaching-learning experiences. ▪

YUNUS LASANIA
Journalist

His areas of interest in research include government policy and information technology.

One of the methods adopted by institutions to sensitise students nowadays is to explain to them about 'good touch' and 'bad touch'.

HOW TO ENCOURAGE CHILDREN TO
ASK TOUGH QUESTIONS

DISSEMINATING SEX EDUCATION TO SCHOOL KIDS

- SANGEETA GOEL

One of the foundations of a flourishing society lies in the healthy decisions of people regarding sexual behaviour, which requires knowledge of sexual anatomy, reproductive health, responsibilities and rights, and so forth. Yet, adolescents in India are rarely given adequate information on these topics. As a result, they are afraid to speak up in spite of frequent sexual harassment on the streets and sometimes at school as well; and their perceptions of gender dynamics are shaped by the flood of misleading, prejudiced and obscene information from various sources of media, including pornography.

Therefore, in moulding self-confident young individuals who can interact with each other in a healthy and respectful manner, sex education is needed. Children often do not have access to correct facts, for their source of knowledge is either Google or their friends. Google search sometimes needs to be taken with a pinch of salt. When faced with a serious question/confusion, a friend in the same age group is often sailing in the same boat and would not be of much help. This is where parents and teachers need to step in.

Children often do not have access to correct facts, for their source of knowledge is either Google or their friends.

In #LetsTalkAboutRape, a 2016 Hindustan Times' campaign, Mary Kom, in her open letter, tells her sons that she was violated when she was barely 17. She wrote this letter when she was 33. I wonder what would she say if she had to talk about it when she was 17.

Most 17-year-old children are aware of violations and may also have experienced them. But they might not possess the vocabulary to articulate it.

I am reminded of one such evening of insufficient articulation and incomprehensible fear. I was a 17-year-old girl then and my 13-year-old brother had asked me, '*Didi, rape ka meaning kya hota hai?*' (What does rape mean?)

I knew it. I had experienced the violations. But I felt incapacitated to put my experience in words. My heart raced as I sifted through the examples I could give my brother to explain the meaning of rape. I cannot recall what I told him. Knowing myself, it must have been, 'I don't know'.

One didn't utter 'rape' before parents. Also, when I was young, there was no internet to search for answers on 'what to say when your younger sibling asks you about rape'. So, I spoke to a friend. Both of us tried hard to come up with ideas to explain rape to my brother but we failed.

We can no longer avoid answering such questions. It is high time we stop washing our hands off the responsibility in the garb of 'let's not disseminate too much information'. Ignorance isn't always bliss. Although at first, we have to help children and adolescents feel comfortable in asking such questions. We also have to equip ourselves to be able to answer and talk about any question that they ask. Parents and teachers need to become equal stakeholders in this task. After all, it is either a parent or a teacher who is a child's most trusted adult.

HERE IS A QUICK GLANCE AT HOW TO DO THE ABOVE:

- Teach children proper names

for genitals and make it comfortable for them to talk about such things. Young children may never ask about rape. But it helps to normalise conversations at a later stage if they know that there is nothing shameful about genitals.

- Tell them that their bodies belong to them. Teach them about safe and unsafe touch. They get to choose who can touch them, where and how they can be touched. If they don't want to be hugged or kissed by someone, it is okay. How about a handshake, a hi-five or blowing a kiss instead?

- Explain the meaning of consent to children. Tell them that no one can force them to do anything that they do not like. If they feel that something is not

okay, then it is not. Teach them to trust their intuitions.

- Tell children that they are not allowed to touch anyone until the other person agrees. Teach them that they need to ask again if the other person appears uncomfortable. Set constructive examples by practising consent during different situations in the classroom and on the playground.

At first, we have to help children and adolescents feel comfortable in asking such questions. We also have to equip ourselves to be able to answer and talk about any question that they ask.

- Keep your answer normal and factual. For example, when someone forcibly touches your genitals or forces you to touch theirs, it is rape.

- Tell them that if non-consensual sexual contact occurs, they can scream, kick or bite the person and run away.

- Teach them to talk about sexual abuse to an adult. Tell them that such things are not secrets. Assure them that there is nothing wrong in sharing it with you or their parents.

- When adolescents ask about sexuality and sexual violence, you could use instances from movies, media and news to talk about it more extensively.

- Adolescents and young adults may know about legal provisions safeguarding sexual rights. It is okay if you are not aware of them. In case they come for advice, how about finding answers together?

- Lastly, talk about rape to both boys and girls. Because boys are as susceptible to physical violations as girls. Also, personal safety is gender-neutral. ■

SANGEETA GOEL
Storyteller, Trainer and Sexuality Educator

Trained in Comprehensive Sexuality Education, Sangeeta has published various articles on gender diversity, sexual harassment and sexuality education.

HOW WE FOUND THE BEST SCHOOL FOR OUR CHILD

MOST PARENTS WANT THEIR CHILDREN IN SCHOOLS WHERE THEY REACH THE HIGHEST LEVEL OF THEIR INTELLECTUAL CAPACITY. THE BEST SCHOOL FOR A CHILD, HOWEVER, IS WHERE THEY LEARN TO BE THEMSELVES.

- ARUNASHIS BHATTACHARJEE
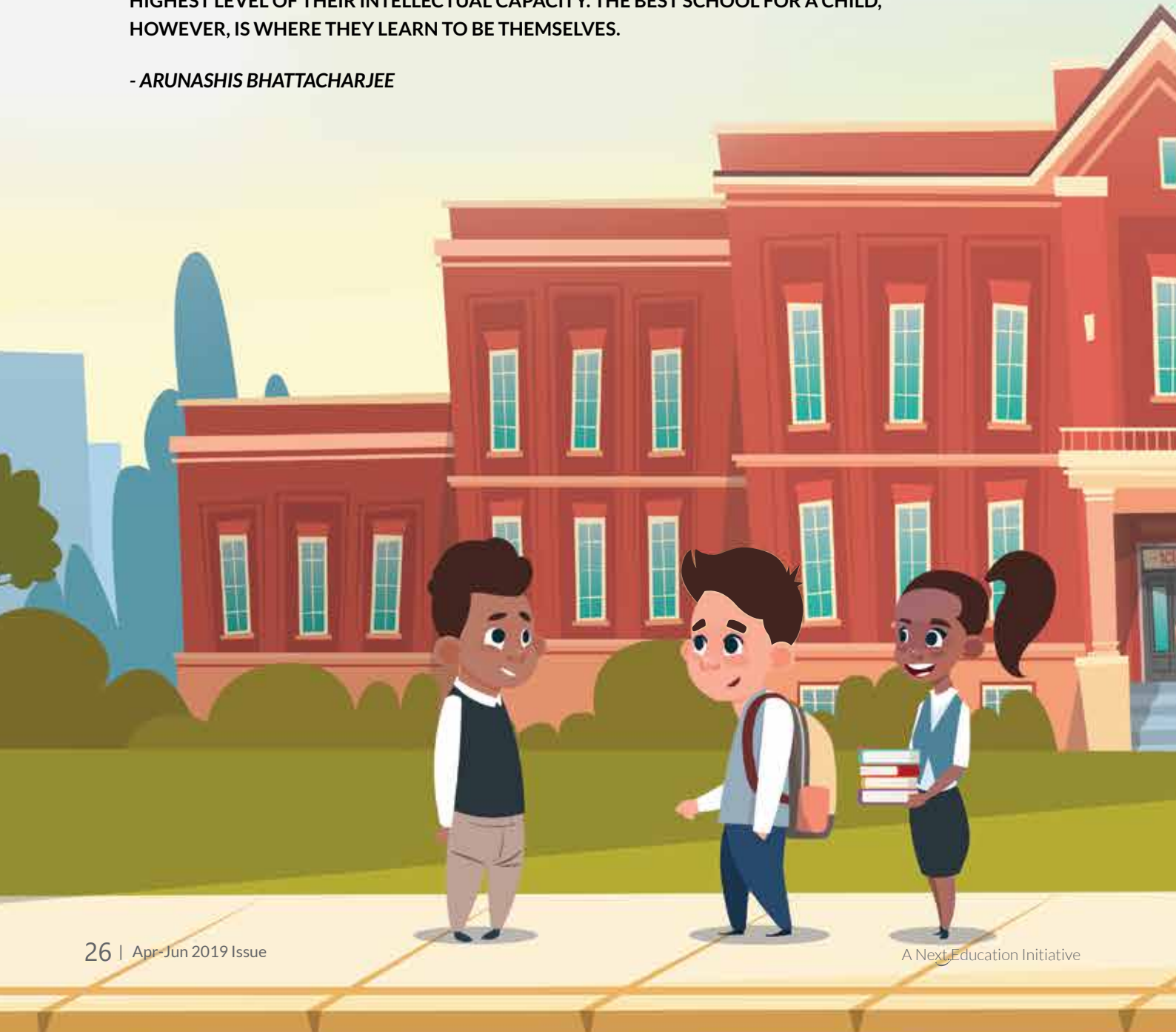
Before we admitted our daughter to a school, I never imagined that finding the right school could be such a taxing job. We decided to admit our daughter in playgroup when she was about 1 year and 7 months old, not because we wanted her to learn something, but because we wanted to fulfil her need for companionship. Being the only child, she craved to be and play with other children. When we noticed her happiness when she was with other kids, and her irritable nature when she was alone, we thought she should play with other children for at least a couple of hours every day – that's how the idea of playgroup started appealing to us.

Making the decision was easy; choosing a school was not. To begin with, we did not know which school was better or if there is a 'best' school somewhere out there. To add to our misery, well-meaning relatives and friends dropped in with suggestions and advices and a lot of anecdotes about a friend's son or a distant relative's daughter going to a particular school and the good or bad aspects of those. We were utterly confused. We visited quite a few schools, and often came out with a scowl on our faces because something or the other didn't seem right. It was then that we started realising that we were going the wrong way. Instead of trying to figure out the 'best' school for our daughter, we should first decide what we were looking for. We realised that we should set a few parameters and decide on a school based on whether it fulfilled our requirements. This helped us zero in on a school, which seemed like a reasonably good option for our daughter.

> Among all other things, what any parent is worried about the most is their child's safety. It is all the more a matter of concern for today's parents because of the rising child sexual abuse cases.

PROXIMITY TO HOME

The first thing we wanted was a good school in the neighbourhood. Travelling a long distance every day would neither be a pleasant experience for a child of that age, nor would it be advisable. The main objective of putting our daughter in playgroup was to give her an opportunity to mix with other kids, play and have fun outside the familiar atmosphere of home. Regular commute, we thought, would definitely take away the fun factor from the experience. Hence, we decided that the best school for our daughter would be a school in the neighbourhood.

SAFETY

The second factor, and perhaps the most important one in our list was safety. It is hard for any parent

to leave their child in the care of strangers. Among all other things, what any parent is worried about the most is their child's safety. It is all the more a matter of concern for today's parents because of the rising child sexual abuse cases. So, we looked for a school which had a good security system in place; where the school management was extra cautious about the safety of each child, and where the management, teachers and non-teaching staff were well aware and mindful of keeping each child away from any harm. Hence, we decided that the best school for our daughter would be a school where she was safe.

HYGIENE

The third factor in our list was hygiene. While a school might look prim and proper from the outside, a lot of day-to-day practices, say

during feeding of the children or using the toilet could be unhygienic. While we want our daughter to spend time in the playground, we certainly don't want her to be in an unhygienic atmosphere. Different types of flu that were unheard of when we were growing up (but common today), can be avoided by following personal hygiene, and we definitely didn't want our daughter to get infected. So, we checked the hygiene practices the schools followed and how well the teachers and staff were aware of it. Hence, we decided that the best school for our daughter would be a school that maintained high standards of hygiene.

TRAINED TEACHERS

Although there seems to be a growing awareness about the need for trained teachers, many schools

> Learning is a natural process and children learn a lot through their senses. What is really necessary is to provide enough opportunities for them to explore the world around them.

lack teachers with the right kind of professional training. This is especially true of teachers in the pre-primary section. Ironically, young children are the ones who need the maximum guidance since they are at an impressionable age and they tend pick up anything they see, hear or do – be it habits, mannerisms, or speech – that stay with them for their entire lives. So, it is very important for the caregiver to deal with them in the best possible way so that they learn things in the correct manner. More than the infrastructure of a school, I would put my money on trained teachers because I'd like to send my daughter to a place where the people know exactly what they are doing and why they're doing so. Hence, we decided that the best school for our daughter would be a school that had trained teachers.

SCHOOL'S ATTITUDE TOWARDS LEARNING

I see a lot of parents worrying about how much their little one is learning at school. This attitude is partly due to the consumerist mindset that constantly pricks us about how much we are getting in return for our money, and partly due to our ignorance about learning needs and capabilities of children. Unfortunately, very few parents realise that their child does not need to be taught anything. In fact, learning is a natural process and children learn a lot through their

senses. What is really necessary is to provide enough opportunities for them to explore the world around them. They should be allowed to touch, hold, see and taste things (the latter, as much as possible). We should be rather mindful about honing their natural learning abilities by providing necessary assistance than trying to teach them from a book. But in reality, we don't follow this. Moreover, the parental frenzy and pressure percolate down to schools who seem more than eager to keep the 'customers' (in this case, parents) happy to be in the business. As a result, there is a constant effort by schools to 'teach' the children and make education as competitive as possible by including extra-curricular activities, projects, et cetera even for very young children. We didn't want any of these for our daughter. But it's almost impossible to find a school that does not put an effort to introduce children to formal education at an early age. Hence, we decided that the best school for our daughter would be one that showed a child-centric attitude towards learning.

After we went through the rigour of researching, visiting, discarding, choosing and finalising a supposedly good school for our daughter, we realised that there is no 'best' school for a child. Although educational institutions are graded based on multiple factors, the needs of a child, individualised care, et cetera

are often neglected. At the end of the day, most schools following the standard norms set up by the Ministry of Human Resource Development provide more or less the same education to children. The difference, perhaps, is in terms of exposure to science and technology, innovations, the world outside one's immediate surroundings etc. I firmly believe that this exposure is very important for a child. But I also believe that life is a much larger space and we often see people do reasonably well in their lives irrespective of what kind of school they attended. So, while every parent wants to send their child to the best possible school according to their means and capacities, I feel we should find a school which is capable of meeting the requirements of a child. That, in all likelihood, would be the best school for our child. ■

ARUNASHIS BHATTACHARJEE

Editorial Manager at Next Education

A father to a preschooler, he has editorial experience of over 10 years at Cambridge University Press and Next Education.

MY STUDENTS INSPIRE ME EVERY DAY

TODAY'S EDUCATION IS MORE SUCCESSFUL WITH COLLABORATION. A TEACHER SHARES HER EXPERIENCE ON THE WONDERS OF COLLABORATIVE LEARNING.

- ISSANI PAUL CHOWDHURY

The classroom is a fun place to be in, especially in today's time when education is a collaborative, independent and inter-disciplinary domain. All passionate educators would surely share this sentiment of mine. No longer are the students ready to be lectured to. Teachers of today are facilitators who help learners question conventions, explore creative possibilities and contribute to leadership. As new-age educators, we only need to provide

Teachers of today are facilitators who help learners question conventions, explore creative possibilities and contribute to leadership. As new-age educators, we only need to provide students with the wings to fly and wait for the magic to happen.

and inferring their meanings, and comprehending, analysing and commenting on the overall effects of language features of the text. For example, our discussions revolved around 'creaks and blisters' on the deck of the ship and the children of the crew who 'lived in a bubble'.

Finally, it was time for the execution of tasks, such as summarising the article in one's own words. So, on the last day of the week, i.e. Friday, I divided the class into three groups.

I told my class, 'On Monday, 28th January, we have a double period. However, I will be on leave. You all will be responsible for conducting the class without any supervision like young, would-be adults.

Barring the jet of questions directed at me following the first sentence, they all nodded in purposeful agreement.

I continued, 'Each team shall collate points independently, collaborate among themselves and present the summary before the other two teams. All the teams are expected to unanimously decide a marking scheme and give marks to each other based on it.'

The strategy to be implemented was peer-assessment. I further added, 'No substitute teacher will be provided. Neither will the co-faculty of English as a Second Language combine the two batches.'

On Tuesday night, I received two photographs on WhatsApp from my co-faculty of English. My students had divided the space on the whiteboards and divided it into different sections. They had written learning objectives on the left, criteria of marking on the right, demonstrated evaluation for peer-assessment in the centre and also calculated the averages. They had listed Text Analysis, Recording Time,

Presentation, Voice Modulation and Team Management under Criteria of Marking and had allotted four marks to each category. They had individually assessed each of the three teams' presentation and derived team averages.

To my delight, there was a message for me from my students which read, 'Issani ma'am, please enjoy yourself.'

Upon return to school that week, I learnt that it had taken the class just five minutes to settle down, another 10-15 minutes to discuss and brainstorm points, decide on the sequence and get started. An enthusiastic pupil had voluntarily hosted the day's double periods and they all heartily enjoyed flipping their First Language English classroom that day! ∎

ISSANI PAUL CHOWDHURY
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A Cambridge trained faculty, she teaches English to students of grades 8 to A level.

students with the wings to fly and wait for the magic to happen. Undoubtedly, the learners today are more confident than ever before.

A few weeks back, I happened to facilitate a First Language English class on a nonfictional article for ninth graders. The article was about a hospital ship, Africa Mercy, anchored off the coast of Sierra Leone. We spent the first week reading the text closely, identifying marine and nautical terminology

Introducing Happiness Curriculum in Schools:

PROMOTING MINDFULNESS IN CHILDREN

The curriculum has been designed by a team of 40 central government teachers, educators and volunteers over a period of six months.

- DHEERAJ MEHROTRA

Children of today are 'growing up digital' in the midst of a technological revolution and this applies to every single aspect of their life. However, some forms of technology have proven to be a distraction rather than a boon and it is eating into their study time. It is not uncommon to find students ignoring their lessons in favour of video games, TV series or social networking sites. Even while they are studying, half their attention remains with the characters of their favourite games or shows due to shorter attention spans. Additionally, spending so time on the screen, whether for studies or for entertainment, puts immense stress on them. To this end, the 'Happiness Curriculum' launched by the Government of India would definitely prove beneficial by reducing stress and distractions among students.

WHAT IS 'HAPPINESS CURRICULUM'?

This curriculum includes meditation, value education and mental exercises along with imparting conventional education for pre-primary to grade 8 students. The new subject has been designed and prepared by a team of 40 central government teachers, educators and volunteers over a period of six months. The curriculum is primarily

based on the tenets of mindfulness, which is the psychological process of focussing one's attention on present experiences via meditation and other such therapeutic techniques. It calms the mind and increases awareness of their bodies, thoughts and emotions. Developing these robust strategies for implementing mindfulness in the classrooms is driven by the need to help students relax and keep them engaged in academic activities.

WHY MINDFULNESS IN THE CURRICULUM

As mentioned earlier, students experience high levels of stress due to the pressure of performing well in academics. Moreover, an increasingly competitive environment and the uncertainty of the future aggravates the stress levels and sometimes even leads to suicidal tendencies. The happiness quotient of students affects their productivity at large.

Therefore, teaching mindfulness in schools is very important as it helps students cope with stress as well as achieve academic excellence.

Improves attention and cognitive skills

One of the major reasons why students are unable to focus in class is due to low attention span. Even high-achieving students can lose focus every once in a while, making them feel bad about themselves.

Mindfulness meditation can solve this problem because it directly affects the brain, especially the hippocampus region, which is mainly associated with memory. Practising mindfulness can help students concentrate better. Additionally, it stimulates the hippocampus enabling it to be more active, which improves memory and critical learning skills.

> Developing these robust strategies for implementing mindfulness in the classrooms is driven by the need to help students relax and keep them engaged in academic activities.

Develops better interpersonal skills

The pressure to always be the best in class can affect a student's social and emotional skills. They then tend to focus solely on themselves and become indifferent to what is happening around them.

Interpersonal skills are very important to survive in the real world. So, the school must make sure that the pressure to perform well in school does not affect their ability to interact socially. Mindfulness training makes the prefrontal cortex, the part of the brain that regulates emotion, more active. As a result, students become more empathetic, sociable and their behaviour also improves.

Helps students cope with stress

It is normal for students to experience stress when faced with a challenging situation. However, the modern education system often forces students to experience extreme levels of stress that can negatively affect their mental health. If unchecked, it can lead to serious issues such as the inability to regulate mood, impaired attention, depression, and even physical problems such as increased blood pressure.

Mindfulness can reduce the intensity of stress, and is very beneficial for health. Consequently, it helps reduce blood pressure and

even strengthens the immune system.

School should not only focus on lessons and grades, but also on a student's all-round development. The education system should pay attention to the student's well-being too, and the 'Happiness Curriculum' is an effective way to achieve this. The techniques help to improve the social and emotional skills of children and enhance academic performance by developing their metacognitive and interactive skills in particular, thus facilitating holistic education. ■

DHEERAJ MEHROTRA
Academic Evangelist at Next Education

An educational innovator, author and experiential educator, he has authored numerous books on computer science and educational excellence.

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CONTENT, PEDAGOGY AND TECHNOLOGY:
THE PERFECT FIT

THE AMALGAMATION OF CONTENT KNOWLEDGE, PEDAGOGICAL KNOWLEDGE AND TECHNOLOGY KNOWLEDGE IN THE PROPER CONTEXT ENHANCES LEARNING OUTCOMES.

- VINDHYA VELAGAPUDI AND SOORYA MENON

A study of 15 teachers who had undergone training in integrating new technologies in education found that technology remained an add-on in their classrooms. The ICT tools provided were not being used to integrate content, pedagogy and technology. The only hurdle between teachers and the establishment of a transformative classroom experience appeared to be teacher training following the TPACK model, which could help them bring technological, pedagogical and content knowledge together.

Today's generation of learners has been referred to as the "Net generation", a generation with a greater preference for experiential and hands-on learning (Oblinger and Oblinger 2005). According to Prensky (2001), "Our students have changed radically. Today's students are no longer the people our education system was designed to teach."

In keeping with these changing needs of learners, a number of schools in India too have adopted technology-enabled solutions to transact knowledge in the classroom. The information and communication technology (ICT) resources being widely used today include interactive whiteboards, projectors, computers, laptops, tablets and smart phones. The typical Indian classroom, once characterised

by students sitting through hour-long teacher monologues, is now increasingly seeing the use of digital technology solutions to engage a generation of learners well-versed in technology (Wharton University 2012). However, technology is still more an add-on in schools than an integral part of the school curriculum.

The current generation of learners is more knowledgeable and fluent in the use and application of digital technology than their teachers. They are "digital natives", whereas their teachers are "digital immigrants" (Prensky 2001). Therefore, the success of technology in the classroom is dependent on how it is being used, by whom, for what purpose, and the behavioural changes it brings about

among learners (Lavin et al 2009).

Studies suggest the need for a parallel growth in teaching-learning strategies and ICT use, with the two complementing each other in an organic manner. According to Condie and Munro (2007), the integration of technology into classrooms will need new methods of presenting information to learners and a change in the role of the teacher from an "expert" to a moderator, facilitator or guide. Koehler and Mishra (2009) suggest a model in which teachers possess technological, pedagogical and content knowledge as a unified whole in order to be able to successfully integrate digital technology solutions in their daily teaching-learning practices. Given below is a diagrammatic representation of the model.

In the model, technological knowledge (TK), content knowledge (CK), pedagogical knowledge (PK), technological pedagogical knowledge (TPK), pedagogical content knowledge (PCK), technological content knowledge (TCK) and technological pedagogical content knowledge (TPACK) are the main components of teachers' knowledge. Most training programmes in schools that have chosen to adopt ICTs focus on CK, PK, PCK and TCK. Since these training sessions focus on the above-mentioned elements separately instead of as a unified whole, the connections between TK, TPK
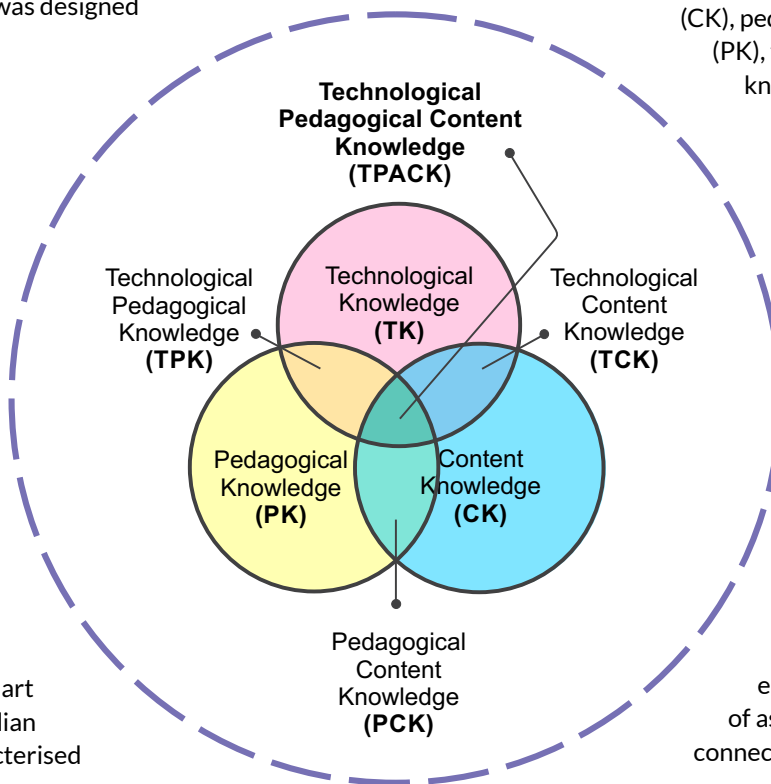
and TPACK are lost, leading to poor ICT integration in schools. According to Maor (2013), there is a relatively low correlation between the domains of technology and pedagogy, but a high correlation between content and pedagogy, emphasising the need for further research and development in this area.

whiteboard to work towards a seamless transformative integration of digital technology solutions in classrooms. The results show that training programmes need to be based on the TPACK framework as teachers' understanding of technology knowledge (TK), technological pedagogical knowledge (TPK), and technological

technology resources available in the classroom (Gao et al 2009; Lim et al 2010). Additionally, teachers who have received ICT training in their teacher education courses display a greater willingness to use technology in the classroom as well as display a higher sense of self-efficacy in relation to the use of digital technology in
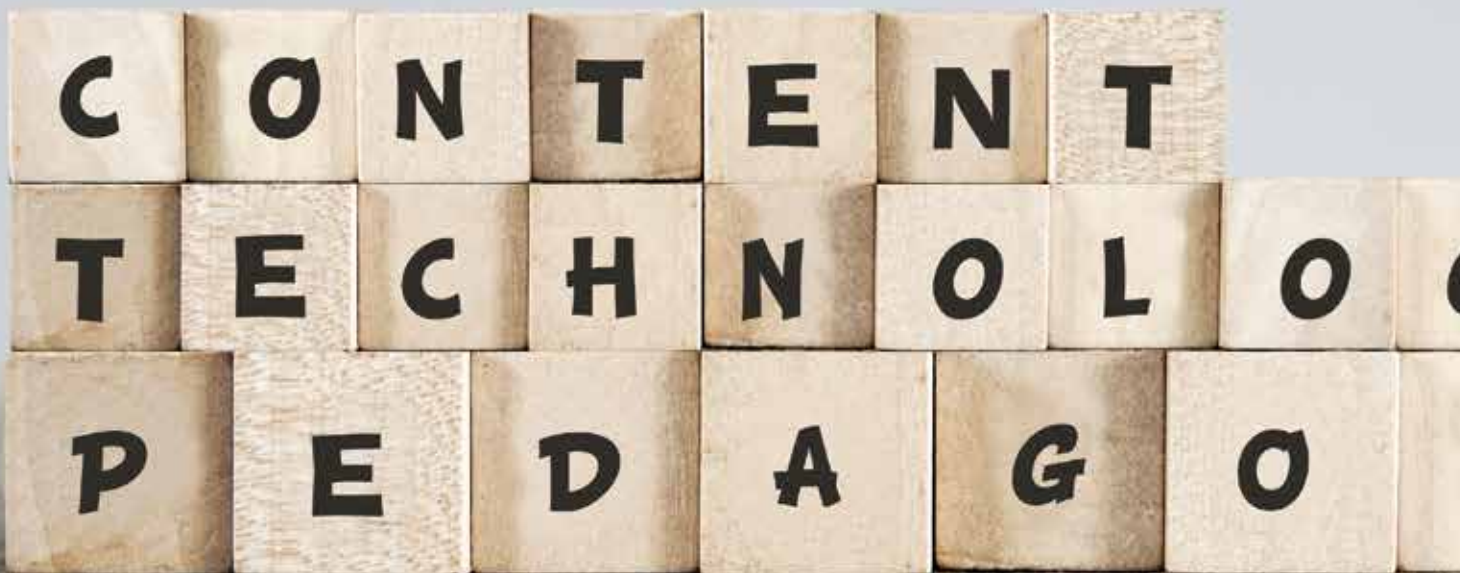
The Next Education study aims to understand the instructional practices of teachers who have received training in the use of an interactive whiteboard called Teach Next, developed by Next Education Pvt Ltd. The study aimed to observe existing patterns of use of the

pedagogical content knowledge (TPACK) was non-existent.

INTEGRATING TECHNOLOGY IN CLASSROOMS

Pre-service teacher education plays an important role in shaping teachers' use of the digital

classrooms (Brown and Warschauer 2006; Hammond et al 2009). The success of integrating technology in classrooms is dependent on how teachers and students accept and use technology in their daily classroom practices. A number of studies indicate that teachers'

beliefs, experiences, competencies and attitudes are critical for successful integration of ICT (Hew and Brush 2007). One study noted that although teachers had a strong desire to integrate ICTs with education, they encounter barriers such as lack of confidence and competencies, negative attitudes and inherent resistance towards ICT

(Edmunds et al 2012).

Current ICT use is broadly characterised by collaborative, investigative and problem-solving activities designed to develop increasingly independent learners who are confident users of ICT. ICT-based curriculums follow an inquiry-based approach to learning, encouraging a greater level of peer interaction compared to non-ICT

preparation, where the major focus is on developing ICT skills. Here, it is important to note that acquiring ICT skills alone does not adequately prepare teachers to integrate ICT in their daily instructional practice (Chai et al 2010). According to Koehler and Mishra (2009), meaningful use of ICT in the classroom requires teachers to integrate technological affordances (Gaver 1991) with

> Studies suggest the need for a parallel growth in teaching-learning strategies and ICT use, with the two complementing each other in an organic manner.

integration (Bingimlas 2009). Like teachers, students are important actors in the integration of ICT in classrooms. And unlike teachers, students are far more receptive to ICT use for daily teaching-learning practices, with a significant number of students believing ICT makes them more effective learners

lessons (Hennessy 2005). As a result, studies show that a number of primary and secondary school teachers have found that ICT has had a positive impact on student attitudes towards school work, attendance at school, reading, writing and presentation skills. In addition, teachers believe that ICT has a positive effect on learners' behaviour during lessons, making pupils more committed to the learning task, allowing them to feel more in control and able to achieve more professional outputs.

A common problem faced while preparing teachers for ICT integration is that many teachers do not have enough exposure to pedagogical use of digital technology solutions. Many teacher education institutes offer only one technology course for teacher

pedagogical approaches for the specific subject matter to be taught. The TPACK framework developed by Mishra and Koehler provides a strong theoretical framework for integrating technology with content and pedagogy.

Teacher training sessions designed on the TPACK framework are intended to build comprehensive understanding of the dynamic interplay of technology with teaching, learning and content/ subject matter representation and its communication to students (Chien and Chang 2015). Development of TPACK among teachers is essential because it helps teachers choose and combine different learning activities, taking into account the learning needs and preferences of students. Research suggests that only when

teachers are familiar with a full range of learning activity types in a specific content can they choose and execute the activity effectively (Rocha et al 2011). This is in line with the RAT (Hughes et al 2006) framework that describes different stages of technology integration.

The RAT framework defines three stages of technology integration: (1) Replacement, where technology serves merely as a means to the same instructional end; (2) Amplification, where technology increases efficiency and productivity but without any fundamental change in the transaction of knowledge; and (3) Transformation, where technology allows forms of instruction and learning that were previously inconceivable.

According to Smeets (2005), ICT has the potential to create a powerful learning environment in which (1) rich and authentic contexts and tasks are provided, to present links to the world outside school; (2) active and independent learning is stimulated; (3) cooperative learning is stimulated; and (4) the curriculum is adapted to the needs and capabilities of individual pupils. An interactive whiteboard can help create this powerful learning environment where teachers have access to vast amounts of content, with the possibility of adapting the content to the learning needs of individual students in class (Glover and Miller 2001).

According to Miller et al (2004), teachers' use of interactive whiteboards appears to develop in stages. Initially, it is a resource, a visual stimulus or support for teaching, with little interactivity. As the teacher's skills and confidence develop, it is used to

The Next Education study aims to understand the instructional practices of teachers who have received training in the use of an interactive whiteboard called Teach Next.

support conceptual development, allowing learners to gain better understanding of specific concepts and processes. Pupils engaged more interactively with the technology benefit from its capacity to challenge their thinking through its ability to manipulate images and text. The most advanced stage, which Miller et al refer to as "enhanced interactive", is achieved when the technology itself fades into the background, becoming an integral and accepted classroom resource.

The digital features of an interactive whiteboard, such as interactive video modules and use of voting boxes for conducting assessments, change the nature of interaction between teachers and pupils, and increase collaboration between pupils (Kennewell et al 2008). According to Beestman (2014), an interactive whiteboard can stimulate independent learning among students provided teachers receive TPACK model training and implement the said training in their daily classroom teaching-learning practices. TPACK model teacher training is a cardinal factor to achieve the above because teachers need to possess technological, pedagogical and content knowledge as a unified whole in order to be able to design ICT-based classroom practices to transform the learning experience.

METHODOLOGY AND FINDINGS

The Next Education study examined teachers and students of grades 3 to 8 in schools located in Chennai, Harda and Mahabalipuram. Three schools, one from each city, participated in the study. Each of the schools uses the Teach Next interactive whiteboard in all classrooms. Fifteen teachers and 172 students participated in the study. Each teacher would teach seven 40-minute periods every day, with an average class size of 12 students. Only four of the 15 teachers held a BEd degree, while others held BA/MA or BCom/MBA degrees. Six of the 15 teachers had less than one year of teaching experience. All three schools were English-medium private schools catering to students from middle- to low-income groups. The Mahabalipuram and Harda schools were set in a rural location with children from agricultural, small business/vendor families attending. The Chennai school had students from an urban middle class background.

Data collection took place through classroom observation, with a researcher taking detailed notes on the instructional practices of the teachers. Thirty-three math, science, English and social studies periods were observed. The tool

used recorded: (1) classroom environment, judged on the basis of engagement, interaction, on-task behaviour, management, organisation and equity; (2) lesson structure assessed through sequence, importance, assessments, investigation, reflection and resources employed during the lesson; (3) implementation observed through the questioning, involvement, modification, timing and connections made by teachers while transacting the lesson; (4) content—including the significance, fluency, accuracy, analysis, relevance, interconnections and societal impact of the concepts discussed; and (5) technology integration in the classroom, which was judged on the parameters of use, familiarity, adoption and enactment of the technological resource being used. Teachers' instructional practices were rated on a Likert scale of 1–5, with 1 being "not observed at all/ not demonstrated at all" to 5 being "observed to a great extent/demonstrated to a great extent". These ratings were determined depending on the number of instances a particular event/instructional practice was displayed by the teacher during class. A rating of "5" was awarded when a particular instance was observed 10 times or more in a class of 40-minute duration.

Students' response to teacher instruction and the use of ICT resources was also recorded: (1) classroom setting, where student behaviour was observed during independent seat work, small group and large group activities with the teacher present; (2) on-task behaviour, observed through students' active engaged time, passive engaged time and their responses to instruction; (3) off-task behaviour, which included motor, verbal and passive behaviour displayed by students; and (4) technology integration, which looked at the accessibility, engagement, familiarity and adoption of the technological resource used in class. Student behaviour was rated on a Likert scale of 1–5,

with 1 being "not observed at all" and 5 being "observed to a great extent". These ratings were determined depending on the number of instances a particular event/ behaviour was displayed in class, and on the number of students who displayed this behaviour. A rating of 5 was awarded when a particular instance was observed more than 15 times in a class of 40-minute duration.

A survey questionnaire was used to collect background information on teachers' education and training, work details and school profile.

Teachers used a self-reporting tool to reflect on their educational beliefs and practices, including classroom management, instructional strategies, technology use in teaching and learning, motivational effects and usability. A semi-structured interview was conducted with teachers to gain anecdotal insights into all these indicators.

The data collected through classroom observation, beliefs and practices questionnaire and teacher interviews reflect that teachers' instructional practices and technology use was largely learner-centric but not transformative in nature.

A number of teachers had strong content and pedagogical knowledge in the subjects they were teaching, which enabled them to ask questions in class that probed learners' understanding. They were able to introduce various topics for class discussions, and encourage students to come up with insightful points by digging into their own life experiences. Teachers conducted different collective class activities, and independent activities for learners. Teachers gave each student in class the opportunity to speak up and express her thoughts/ opinions/examples. Instead of spoon-feeding answers to students, teachers would let the students construct their own knowledge through discussions. Explanation of concepts was followed or preceded by an activity. However, in classes that held more than 20 students, teachers were unable to give time to every student.

The teachers were found to be fairly familiar with the technological resources. They were able to navigate between the vast amounts of subject-related content available, to reach the particular module that was relevant to the concept being discussed in class on that particular day. Often teachers would pause the video modules either to give additional explanations, or to encourage students to generate examples and discuss those examples with one another. Teachers were also making use of the activities that followed the modules.

However, while teachers were able to navigate between subjects and the available video modules, the add-ons available, such as Next Studio, Next Labs, Dictionary, Tools and Picture Gallery, which have the potential to redefine the learning experience exponentially, were largely left untouched. Teachers lacked familiarity with these features. One of the reasons behind this was that a number of teachers did not have the time to spare during school hours to explore, practice and familiarise themselves with the resource. All teachers, at one point or another, fumbled with the "logical pause" feature of the video modules.

Though the pedagogical strategies employed were learner-centric, they were largely traditional in nature because they were unable to use the add-on features mentioned above in their daily teaching-learning practice. Therefore, the use of the smartboard was always restricted to the playing of video modules and the activities that follow the modules. Thus, although classrooms were learner-centric in terms of curricular goals being met, instructional strategies employed and technological resources selected, they were still

not transformative in terms of "fit"—that is, content, pedagogy and technology together (Harris et al 2010).

LEARNERS' ATTITUDES

Learners understand concepts better and faster when a smartboard is used for explanation. This is because teachers used the smartboard primarily as a visual aid. As a result, students understood and familiarised themselves with the content, and retained and reproduced it at a later date. This is because multimedia representation of information effectively delivers information to both auditory and visual learners (Mayer and Moreno 2002). During class observation and teacher interviews, a number of teachers noted that they spent less time on explaining concepts and more on discussing the examples and ideas generated by students once they began using a smartboard.

Learners displayed active engagement—they were attentive to concepts taught, eager to participate in discussions with peers and facilitator, and keen to explore new concepts and take notes. When one student contributed his/her view on the matter being discussed in class, another student would add to the point, leading to a whole class discussion. Thus, it was observed that students and teachers collaborated with one

another instead of competing with one another during their pursuit of knowledge.

Learners' attitudes towards formative and summative assessments are free of fear. They enthusiastically engage with the assessments given in smartboard learning modules. These modules are followed by activities, which enables the teacher to assess how much each student understands the concepts covered in class. It was found that students viewed these activities more as a game than assessment. They were eager to participate and waited their turn to answer the question that popped up on screen.

TEACHERS' BELIEFS AND PRACTICES

All the teachers rated themselves high on the constructivist parameters mentioned in the questionnaire, and low on the traditional indicators. However, classroom observation data showed that their practices were not entirely in sync with their beliefs. Eleven of the 15 teachers observed employed learner-centric instructional practices. But all the teachers employed the smartboard as an add-on, rather than as an integral part of the curriculum.

Most of the teachers were unaware of the knowledge they were lacking. When asked if they needed more

Learners understand concepts better and faster when a smartboard is used for explanation. This is because teachers used the smartboard primarily as a visual aid.

product training they said, "No, we have received a few trainings and there is nothing more we want to learn."

Most of the teachers use technology as a substitute for themselves. According to them, the Teach Next video modules significantly reduce their work burden, allowing them to spend less time on repeated explanation of concepts and focus more on activities to be conducted or discussions to be held.

Teachers were found to make extensive use of only those features of the smartboard that were easiest to find and most convenient to use. For example, videos and activities. These are the two aspects of the smartboard that require less effort on teachers' part, which led them to instantly gravitate towards these, while eclipsing the rest.

A smartboard successfully grabs learners' attention, resulting in the facilitator managing instructional time effectively. Teachers interviewed all felt that smartboards significantly reduced the time they spent on classroom management. However, teachers do not use this to their advantage by designing learning experiences that can transform their classroom.

Teachers had a hectic schedule, with little or no free time for their own professional development. Given their tiring and burdensome schedule, they felt no motivation to undertake such activities.

The conflicting findings suggest that while teachers possessed subject knowledge, knowledge of pedagogy and the ability to use the smartboard for their respective subjects, they were unable to put the smartboard to creative use. Seen in the TPACK

framework, we can conclude that while teachers do posses content knowledge, pedagogical knowledge, pedagogical content knowledge, and technological content knowledge, they lacked partially in technological knowledge, and completely in technological pedagogical knowledge and technological pedagogical and content knowledge. As the interview data collected later revealed, this was mainly because of a gap in the training they have received.

Additionally, due to the school policies in place, teachers lack the opportunity to explore the smartboard as an essential part of their job. All the teachers who participated in the study handled at least seven periods, with only one free period during the whole day. This free period would usually be spent correcting students' homework and classwork assignments. The arrangement effectively left no time for teachers to explore the interactive technological resource and improve their own technological skills, TK, TPK and TPACK. Therefore, the only hurdle standing between teachers and the establishment of a transformative classroom experience is training sessions based on an integrated TPACK model and convincing the school management of the advantages and necessity of such training.

Transformative practices have the potential to redefine student learning and enable them to make comprehensive connections between subjects and within subjects (Puentedura 2010). On the other hand, knowledge of technology, pedagogy and content in isolation from each other leads to only "replacement", or at the most "amplification" (Hugheset al 2006). ■

This article first appeared on digitalequality.in, in the collection of articles on Technology in Education: Perspectives & Praxis, published by CCDS, Pune.

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WHAT IT TAKES TO
PROMOTE 21ST CENTURY LEARNING

INCORPORATING **SMART** GOALS IN PEDAGOGY TO DEVELOP NEW-AGE SKILLS.

- DR. SUSHMA MALIK

India's education system is definitely heading towards a much-needed transformation. This transformation can be hastened only with a different framework of pedagogy where technology plays a vital role – one that includes cyber platforms and digital forums. The boons of the technological miracle, the internet, can be optimised and its banes moderated if schools and parents realise the new age needs and demands. Open seminars and tête-à-tête between all stakeholders will help.

Technology-driven learning develops effective approaches to teaching and learning and works seamlessly within different global contexts.

From the manner in which teachers are trained to the format of classroom sessions, from the style of teaching to the manner of testing knowledge, technology changes everything. Students are exposed to different cultural identities through technology. Additionally, there is a focus on developing inter-disciplinary understanding rather than looking at individual subjects in isolation. Education should aim to transform students and schools as they learn through dynamic cycles of inquiry, thought and reflection.

Incorporating **SMART** goals into the pedagogy is a sure-shot way to develop the necessary skills in 21st-century learners. It stands for:

S- Specific

M- Measurable

A- Achievable

R- Realistic

T- Timebound

An extremely important part of modern education that is still missing in most addresses to educationists is 'mindfulness'. We already have maths, language, science and environmental studies, but we need to expand this traditional curriculum with a

new subject: mindfulness.

The objective is to improve mental health, by including relaxation techniques such as breathing exercises and other methods, to help students keep a clear head in the era of information overload and prevent early onset stress disorders. The goal of the programme should be to study which approach works best for young children and introduce these activities at the primary level itself to ensure mental health, well-being and happiness.

A perfect school is one which should become the one-stop destination of new age learners seeking the best amalgamation of academics, sports extracurricular activities, life skills, soft skills, international programmes and the latest technologies. Teachers should be passionate mentors and create an environment where the facilitator feels happy transacting the content while students feel good absorbing the same.

Learning should never be a competition; this has to be understood by all the interested parties – parents, students, management and all those who matter in a child's life. All schools and educationists should, therefore, strive to remain committed to empowering learners with skills and social competencies which enable them to make positive contributions to the world community as a whole.

Student's needs should be accorded the top priority and traditional and modern educational values respected and encouraged to coexist. The school's objective should be to provide a safe space along with an appropriate and challenging environment, empowering the students to be well-adjusted in an era of global lifelong learning and improvisation. ■

> Learning should never be a competition; this has to be understood by all the interested parties – parents, students, management and all those who matter in a child's life.
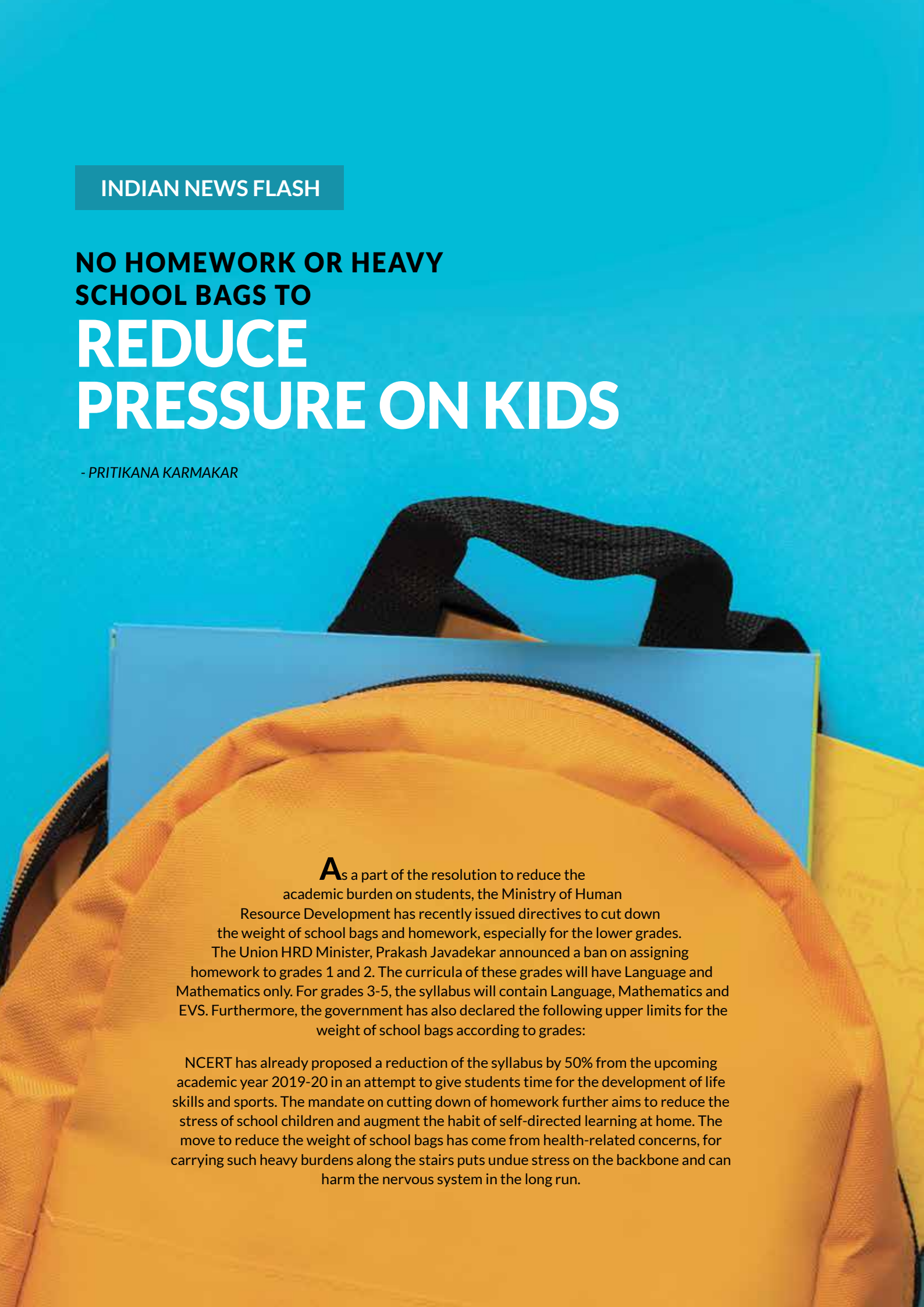
DR. SUSHMA MALIK
Principal, Sheoran International School

A notable academician with an experience of 25 years in teaching and administration, she has addressed several K–12 issues on various platforms.

NO HOMEWORK OR HEAVY SCHOOL BAGS TO
REDUCE PRESSURE ON KIDS

- PRITIKANA KARMAKAR

As a part of the resolution to reduce the academic burden on students, the Ministry of Human Resource Development has recently issued directives to cut down the weight of school bags and homework, especially for the lower grades. The Union HRD Minister, Prakash Javadekar announced a ban on assigning homework to grades 1 and 2. The curricula of these grades will have Language and Mathematics only. For grades 3-5, the syllabus will contain Language, Mathematics and EVS. Furthermore, the government has also declared the following upper limits for the weight of school bags according to grades:

NCERT has already proposed a reduction of the syllabus by 50% from the upcoming academic year 2019-20 in an attempt to give students time for the development of life skills and sports. The mandate on cutting down of homework further aims to reduce the stress of school children and augment the habit of self-directed learning at home. The move to reduce the weight of school bags has come from health-related concerns, for carrying such heavy burdens along the stairs puts undue stress on the backbone and can harm the nervous system in the long run.

WHY KIDS ARE BETTER OFF WITHOUT HOMEWORK

According to a Times of India research, 74% of the teachers in India use homework as the primary means of assessing student progress, for it supplements the basic understanding of concepts, assesses basic problem-solving abilities, and notifies parents of the progress of the curriculum. However, a survey of over 4,000 students conducted by Stanford University researchers says that too much homework is detrimental for kids as it reduces the time for self-study and barely leaves the time for the extracurricular activities. Furthermore, homework pressure is the biggest reason for physical and mental stress in students.

Another point of concern is that a lot of parents end up doing their children's homework assignments for them, which is detrimental for the children. Additionally, the lack of time for engagement with family and friends make the children isolated, stagnating their social and emotional development. Hectic homework schedules pressurise teachers since they are expected to collect, mark and redistribute extra work for their students on top of classwork and summative assessments. This takes time away from better assessment methods, such as experiential learning. Therefore, the move to cut down on homework will be beneficial for the overall development of the children, especially if the government makes provisions to help teachers integrate activity-based learning as part of the curriculum.

WEIGHT-LOSS FORMULA FOR SCHOOL BAGS

Reducing the weight of school bags is a welcome move. But teachers and

Grades	Max. weight of school bag
1 and 2	1.5 kg
3, 4 and 5	2-3 kg
6 and 7	4 kg
8 and 9	4.5 kg
10	5 kg

A survey of over 4,000 students conducted by Stanford University researchers says that too much homework is detrimental for kids as it reduces the time for self-study and barely leaves the time for the extracurricular activities.

academic experts doubt whether it can solve associated problems. Students are forced to carry 14 to 18 books on an average day because classroom instruction continues to be content-based and most schools do not have provisions for digital content. The best way to tackle this problem without compromising on content is to digitise classrooms and provide online content. This will help to introduce blended learning techniques, which can make classroom sessions interactive and engaging, producing better learning outcomes.

Thus, these two mandates have the potential to change the traditional methods of Indian K-12 education, ushering in an era of healthy pedagogical practices and student-centric learning. ◼

PRITIKANA KARMAKAR
Sub-editor

She is a part of the editorial team for The Next World magazine and her area of research interest is English Language Teaching.

EVENTS

NEXT EDUCATION–AWS CONFERENCE: EDTECH SOLUTIONS FOR 21ST-CENTURY SCHOOLS

Next Education and Amazon Web Services had jointly hosted conferences in major cities of India between December 2018 and February 2019. The conferences discussed how the latest edtech solutions are reshaping Indian K–12 education.

CBSE NATIONAL SCIENCE EXHIBITION

Held on 8 and 9 February 2019 at Mayoor School, the exhibition provided a platform for students to showcase their innovative skills in science and technology. The Prayantram-Lungs Function Test Device built by the students of Birla Shishu Vihar, Pilani has been declared the winner.

JAIPUR LITERARY FESTIVAL

Held from 24–28 January 2019, it was a melange of literary, musical, artistic and culinary displays from all over the world. Renowned people such as authors Chitra Banerjee Divakaruni and Ben Okri, singer Usha Uthup, cricketer Mithali Raj, and actress Manisha Koirala were a part of it.

GURGAON KID'S FAIR

This edutainment event was held from 15–17 March 2019. The fair promotes healthy growth in early years and develops creativity and team skills via activities such as science exhibitions, art and craft displays and role-playing.

IDEATE FOR INDIA NATIONAL CHALLENGE

The Ministry of Electronics and Information Technology has designed this contest to help young students solve problems around them and their communities. Phase 1 had ended in February 2019, and Phase 2 and 3 consisting of boot camps and a national level exhibition, respectively, are in progress.

NATIONAL TALENT SEARCH EXAMINATION

It is conducted by NCERT to test the aptitude of tenth-graders in science and mathematics. The state-level exams are over and the selected candidates will appear for the finals in May 2019.

NATIONAL MATHEMATICS TALENT CONTEST

It is a nationwide mathematics contest conducted by the Association of Mathematics Teachers of India (AMTI). The preliminary examination will be held at the end of August 2019. The registrations usually start mid-July.

CBSE NATIONAL SCIENCE EXHIBITION

It is a national fellowship programme for high-school students, conducted by IISc Bangalore to promote research careers in science. The registrations will start in September 2019.

WFUNA INTERNATIONAL MODEL UNITED NATIONS (WIMUN) INDIA 2019

To be held in India from 29 April to 2 May 2019, it provides students with the most accurate simulation of the UN via intensive training workshops and conference sessions on important global issues.

TECHNOTHLON, IIT GUWAHATI

It helps students of class 9–12 think out of the box, collaborate and exercise their creativity. The prelims will be held on 14 July 2019. The registrations are open on the official website.

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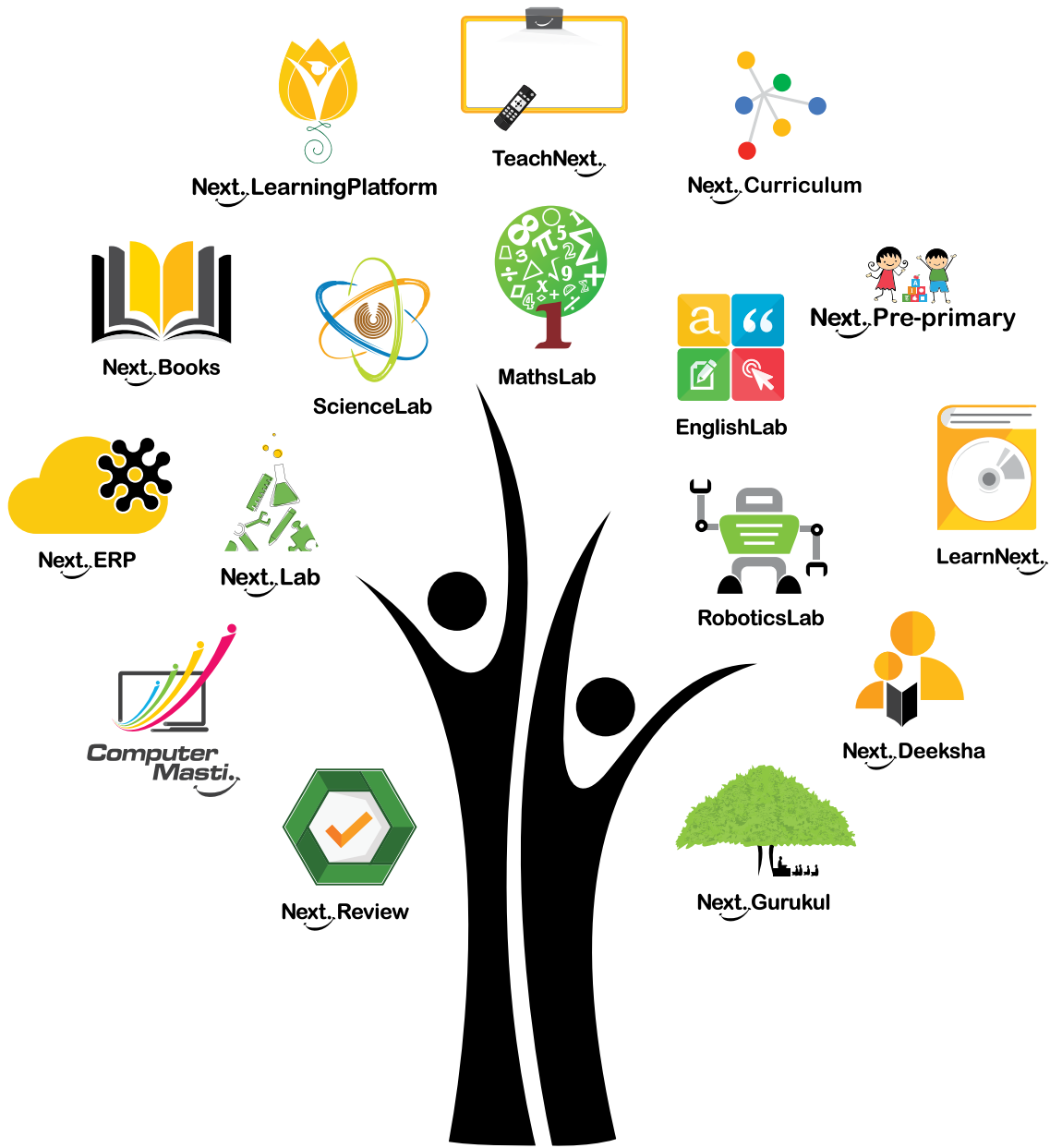
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