

INTRODUCTION

TOOLKIT FOR APPLIED LEARNING IN SCHOOLS

AN OVERVIEW

All young people deserve to experience an enriching and engaging education that prepares them well for a variety of pathways beyond school.

Education policy makers and leaders in India and many countries of the world recognise that this can be achieved by strengthening connections between what is learned in the classroom and how it can be applied in the world outside the school.

If schools are to support students to apply their classroom learning in real-world contexts:

- What needs to change?
- How can we build a thriving applied learning ecosystem?
- How can teachers deliver applied learning effectively?
- How can school leaders support teachers to do this?

This Toolkit is designed for teachers and school leaders in India who are seeking guidance in implementing applied learning practices in their educational setting. It provides adaptable tools and curated resources based on research to suit different educational contexts and communities.

WHAT IS APPLIED LEARNING?

Applied learning takes many forms and is given many names. In this Toolkit, we define Applied Learning as follows:

In applied learning, students learn by doing – engaging in authentic, collaborative experiences connected to real-world contexts and activities. They learn through, for and about work in a way that is meaningful for them. Students demonstrate the competencies they have gained in assessments that reflect real-world practices.

There is no one-size-fits-all approach in applied learning. It can look very different depending on the setting, the school community and the curriculum.

WHY ‘APPLIED LEARNING’?

Applied learning is an umbrella term that covers different forms of practical education including active, experiential, collaborative, project-based, problem-based, vocational, and competency-based education ([see glossary for definitions](#)).

The broader term ‘applied learning’ is used in this Toolkit for three main reasons:

1. It can provide a common language between education systems. Narrower terms (like competency based or vocational education, experiential, or active learning) can be limiting and are defined somewhat differently across sectors and countries.
2. The idea of applied learning resonates in diverse educational levels and settings. The principles of applied learning can be practised in any subject and in any type of school. It avoids a false divide between academic and vocational studies, theory and practice.
3. Applied learning includes a strong focus on essential transferable skills including communication, collaboration, creative and critical thinking. This is increasingly important as educators worldwide focus attention on the learning process, seeking valid and reliable ways of measuring what students know and can do, in the context of rapid developments in Artificial Intelligence.

WHAT DOES APPLIED LEARNING MEAN IN THE INDIAN CONTEXT?

In the Indian schools context, applied learning includes skill-based, vocational courses offered at different levels, from middle school (class 6 to 8) through to secondary school (class 9 and 10) and senior secondary school (class 11 and 12). These are commonly referred to as National Skills Qualifications Framework (NSQF) courses, skill education, experiential learning or vocational education. Many schools are introducing pre-vocational applied learning at middle school and vocational applied learning at the high and higher secondary school levels.

Education leaders and teachers across all school settings are being encouraged to reduce the heavy dependence on textbooks and to engage more closely and actively with the community and their local context. In alignment with the recommendations of National Education Policy (NEP 2020) and state government policies, schools are setting applied learning goals including exposure (or sensitisation) and transition to the world of work, developing multidisciplinary education and skill acquisition, and working to ensure equity, access and inclusivity.

The Central Board of Secondary Education (CBSE) has embarked on nationwide offline mandatory, capacity-building programmes for school teachers and leaders to support the rollout of skill-based learning for classes 6-8. Aligned with NEP 2020, it aims to support integration of applied learning and project-based learning through the recently launched activity books named 'Kaushal Bodh'. These books include six suggested projects annually – two per designated area. Schools may directly use them or adapt or develop their own projects using local resources and following rules from CBSE.

Another important development concerns the introduction of curriculum on generative artificial intelligence (Gen AI) in schools, starting class 3 onwards. This involves designing a meaningful and inclusive curriculum under National Curriculum Framework for School Education (NCFSE) 2023 through a consultative process with CBSE, NCERT and school boards.

A pathbreaking initiative in applied learning is the mandate from CBSE instructing all schools affiliated with the Board to establish a 'Composite Skill Lab' along with all necessary equipment and machinery to effectively implement the recommendations of NEP and NCF-SE.

This Toolkit aims to assist school leaders and teachers to achieve these applied learning goals.

WHAT DOES APPLIED LEARNING MEAN IN THE AUSTRALIAN CONTEXT?

In Australian senior secondary school settings, applied learning can refer to subjects that align with formal Vocational Education and Training (VET) standards certified by the Australian Skills Quality Authority (ASQA) or by the relevant state or territory training authority. Applied learning can also refer more broadly to a teaching approach in any subject or program that supports students' active, hands-on learning that engages with or is applied in the world beyond school.

As in India, there is a strong governmental commitment to building more opportunities in the education system for meaningful work-related learning, with a focus on the final years of schooling. According to the Australian Curriculum, Assessment and Reporting Authority's overview of Senior Secondary Certificates, these are designed to provide 'a solid foundation for transition to a range of post-secondary schooling pathways, including work, further study and participation in civic life.'

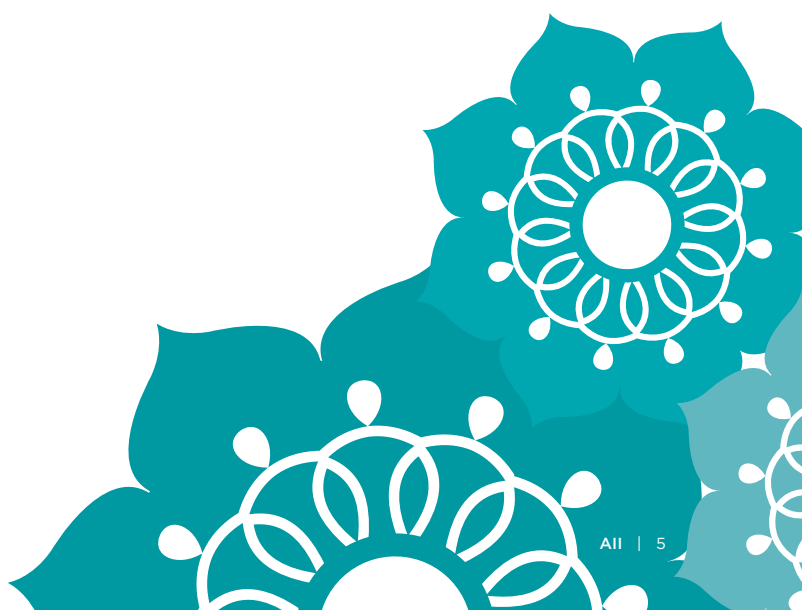
Each state or territory's curriculum body develops its own Senior Secondary Certificate. Thus, depending on location, applied learning at the senior secondary level can take a number of forms, with vocational studies integrated to varying degrees. Some Australian schools also offer the International Baccalaureate (IB), which incorporates aspects of applied learning, most explicitly in the Activity and Service component.

Secondary schools delivering vocational subjects work closely with Registered Training Organisations (RTOs) formally accredited under relevant national and state legislation. Some senior secondary schools are registered as RTOs, but for the most part, schools develop relationships with a local RTO to support applied learning. Some qualifications offered span VET and higher education sectors, enabling pathways between them.

In rare but notable cases, schools have developed brand new vocational courses in response to industry needs, drawing on local expertise. One example is the only musical instrument making course in Australia, developed by a Victorian government senior secondary school, NCAT, in collaboration with a local manufacturer, Maton Guitars. Some schools also operate as hubs, sharing their trade training centres, applied learning resources and professional knowledge with other schools.

In recent years, state and federal governments have supported a move to increase the integration of Vocational Education and Training (VET) with mainstream academic Senior School Certificates. For example, in response to the Firth Review (2020), the state of Victoria introduced a new Vocational Major (VM) in 2023 with an accompanying public relations campaign focusing on the benefits of applied learning. Although this major system change is still in its early phases, the second year of the scheme registered a significant increase in enrolment in vocational subjects. A concerted effort is under way across Australia to build an appreciation of the benefits of applied learning approaches across all educational settings, to engage with the full range of post-school pathways and support students choosing such pathways.

The Australian experience in applied learning has informed the development of this Toolkit and selected case studies are included where they have relevance to the Indian context. Opportunities for knowledge sharing are outlined in the final Partnerships section.



WHERE AUSTRALIAN AND INDIAN APPROACHES TO APPLIED LEARNING INTERSECT

Applied learning is gaining prominence in both India and Australia, but at different stages of development – creating strong opportunities for reciprocal learning. In India, particularly at the secondary and higher secondary levels, applied learning is still emerging. The National Curriculum Framework for School Education (NCF-SE), informed by NEP 2020, outlines ambitious directions for experiential and vocational learning. However, these ideas are yet to be fully realised at the school level and require deeper engagement from school leaders, teachers, students and parents. Australia’s longstanding experience in embedding applied learning offers valuable insights into how policy intent can be translated into classroom practice and system-wide structures.

In Victoria, applied learning is supported through established pathways such as the VCE Vocational Major (VCE VM), which provides students with flexible options to combine academic and vocational learning. Teachers play an active role in curriculum development, and initiatives such as Tech Schools demonstrate a strong emphasis on student agency and real-world learning. For India, these models highlight how applied learning pathways can be legitimised within mainstream schooling and supported through coherent curriculum and assessment frameworks.

At the same time, both countries are grappling with how best to prepare and support teachers for applied and vocational learning. In India, vocational subjects in schools are often delivered by third-party trainers rather than trained, dedicated teachers embedded within the school system. Australia’s inclusive professional development ecosystem – featuring Communities of Practice, online learning, and short- and long-term programs involving industry experts – offers practical models that could inform India’s efforts to build teacher capability in this space. Conversely, India’s scale and diversity present opportunities for Australia to learn from innovative, low-cost, and community-driven approaches to applied learning.

India’s strong policy push to integrate vocational and skill-based subjects into the traditional curriculum under NEP 2020 also presents lessons for Australia. The focus on mainstreaming vocational education and aligning it with academic learning underscores the importance of curriculum coherence and equity. Achieving this in India will require innovative alignment strategies and inclusive partnerships with industry and local communities – areas where Australia’s experience with industry-sponsored programs and tech school collaborations provides useful reference points.

Overall, while Australia offers mature system-level examples of applied learning, industry engagement, and teacher professional development, India contributes valuable perspectives on large-scale reform, integration of vocational learning within mainstream education, and community-oriented implementation. This Toolkit takes into account the complex and context-specific needs of both countries’ school systems to develop applied learning resources that reflect best practices from Australia and are also adaptable to the unique needs of Indian secondary school teachers and school leaders.

THE TOOLKIT

This Toolkit is designed to assist **all** school teachers in implementing applied learning across the subjects they teach. It can also be used by teachers who are responsible for offering skill-based vocational courses in schools.

The Toolkit provides teachers and school leaders with a set of flexible and adaptable guidelines and resources for designing, facilitating and assessing applied learning in a senior secondary school setting.

The tools include checklists, tips and templates, framed by a set of core applied learning principles. They offer guidance on how to:

- support the development of an applied learning ecosystem
- create or adapt curriculum for engagement and relevance
- build teachers’ confidence in pedagogical and assessment practices that underpin applied learning.

APPLIED LEARNING PRINCIPLES

The following principles of curriculum design, pedagogy and assessment are informed by research (see References at the end of each Element) and based on discussions with school leaders and teachers in India and Australia.

Adapting Curriculum to Applied Learning

1. Place students at the centre to enable a strengths-based approach that develops their capacity to learn in different contexts
2. Clearly explain the knowledge, skills and attributes to be developed through the unit of study (subject/course/module)
3. Show clear links to applications in the real world
4. Specify the literacy, numeracy and digital capabilities that students will require to be successful in study and work
5. Use a framework that allows for differentiation, so that teachers can build on students' strengths
6. Make connections to local conditions and opportunities that can be used as practical learning contexts
7. Provide teaching resources and materials which ensure the unit of study is connected to real-life applications of the knowledge, skills and attributes.

Pedagogy for Applied Learning

1. Ensure activities that build on students' strengths and interests
2. Make clear connections between classroom learning and real-world applications
3. Support students in linking theory and practice through an active learning cycle
4. Create an enabling environment for collaboration and teamwork to reflect real-world practices
5. Provide scaffolding to guide students' progress toward confident application of learning beyond school
6. Model constructive feedback and reflective practices

Assessment of Applied Learning

1. Use authentic assessment tasks that reflect the way the knowledge and skills will be used in real settings
2. Use a developmental rubric to identify (a) what students understand and can do and (b) what students need to do next to continue to progress in their learning
3. Ensure incremental improvements in learning can be recognised and reported
4. Make rubrics readily available to students beforehand to help students regulate their own learning through self and peer assessment
5. Provide constructive and timely feedback to students that clearly communicates where they are at in their learning, and what they need to do next to continue to progress
6. Place emphasis on a culture of learning rather than one of testing

A NOTE ON ARTIFICIAL INTELLIGENCE AND APPLIED LEARNING

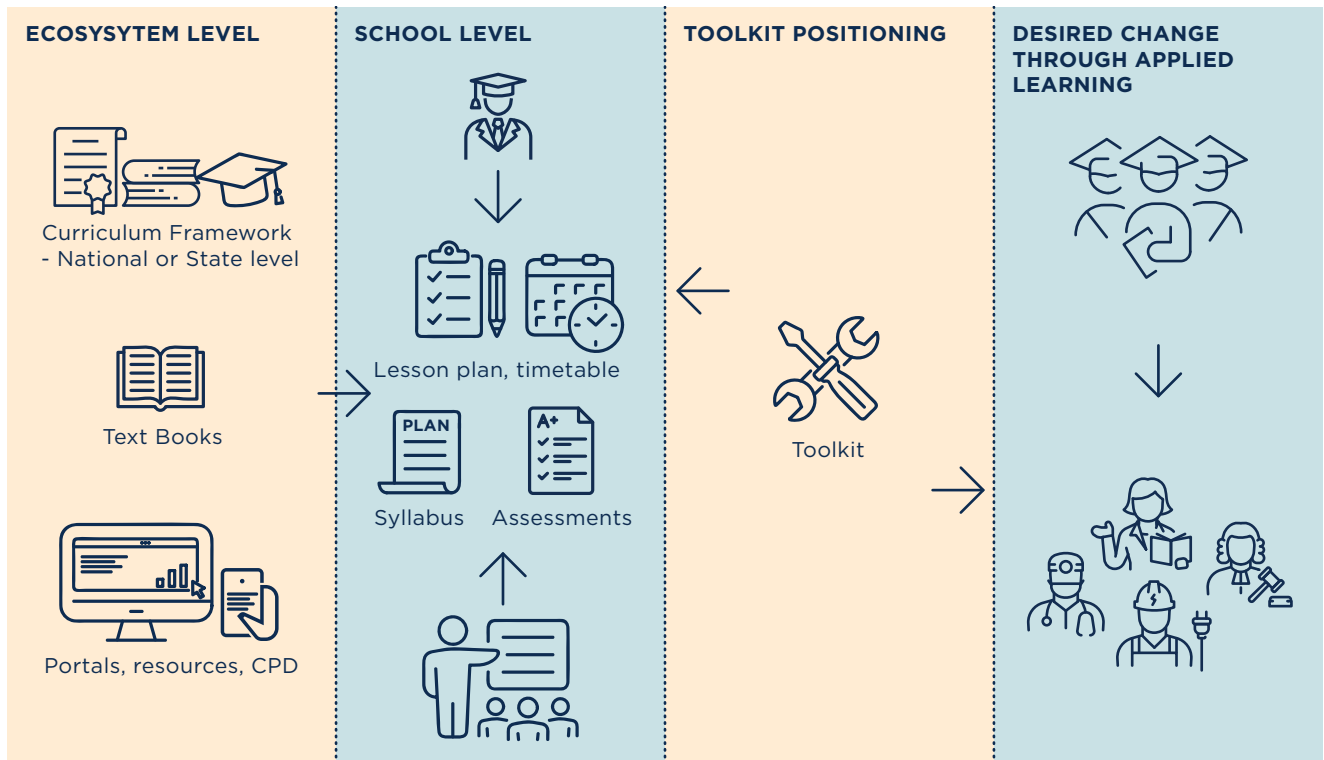
The use of AI tools is rapidly advancing in education as it is in all other sectors. Given that applied learning seeks to prepare young people for the world of work, it is essential to consider current and anticipated uses of artificial intelligence in industry and the professions. These will inevitably shape approaches to curriculum design, pedagogy and assessment.

This Toolkit does not offer detailed guidance on the use of AI (generative or traditional) but recommends that educators follow guidelines for ethical practice that are fast evolving. Considerations include data privacy, copyright and intellectual property, environmental impact and child safety. National and international frameworks, as well as regional and institution-level policies, are in a state of flux at time of writing. It is important for educators to stay up to date with developments through relevant and reliable information channels, like UNESCO and education department news bulletins and resource platforms.

School leaders need to ensure that professional development plans incorporate regular updates on artificial intelligence as its use impacts all aspects of teaching and learning.

WHERE THE TOOLKIT FITS

The Toolkit recognises that school leaders and teachers are working within specific curriculum and assessment frameworks. The resources offered in the Toolkit are focused on ideas and strategies that can be used within the space of possibility between prescribed requirements and classroom implementation.



There are many other aspects which can influence how applied learning is built into the curriculum. Time pressures, class size, access to resources and infrastructure, administrative support, school culture, family expectations and community educational beliefs, as well as workplace and industry connections, will determine what is possible for teachers and leaders.



Reminder: These tools and strategies are designed to be flexible and adaptable, including in settings with limited resources. As a teaching professional, you bring unique insight into your students' needs and learning environment, and you can confidently tailor these tools to support successful outcomes in your classroom.



Teachers, school leaders and education researchers share experience at the All Tools for teachers Bangalore workshop, July 2025. Image: Australia India Institute

TOOLKIT ELEMENTS - WHAT'S INSIDE

The Toolkit addresses **five** important elements of applied learning - the ecosystem, adapting curriculum, pedagogy and assessment for applied learning, and opportunities for partnerships. Each element contains an accessible presentation of ideas and tools linked to its core content. All elements provide:

- A suite of resources - downloadable individually or as a package
- Background notes citing relevant literature from both countries informing the design of resources
- References and additional resource links

HOW THE TOOLKIT WAS MADE

This Toolkit has been developed by the Australia India Institute in partnership with the Centre of Excellence in Teacher Education (CETE) at Tata Institute of Social Sciences (TISS), the Faculty of Education at the University of Melbourne and the International Institute of Information Technology Bangalore (IIIT-B). The project was funded by the Australian Government Department of Education.

STEERING COMMITTEE

A steering committee was formed with 13 experts in applied learning and school education from both countries. The Committee members provided critical guidance on the scope of the Toolkit, its core principles and the agenda of the workshops that informed its development.

The Committee met three times over the course of the project cycle. Key areas of input included:

- Core principles underpinning the Toolkit design, along with systems-level challenges to be addressed
- Structure and thematic focus of hybrid workshops
- Identification of target stakeholders in the applied learning and school education sectors to inform consultations - across government, schools, civil society, teacher training and peak advocacy bodies
- Strategic resources to be included in the Toolkit for inclusive and effective implementation on the ground
- Feedback on the draft Toolkit, including developed resources and supporting case studies

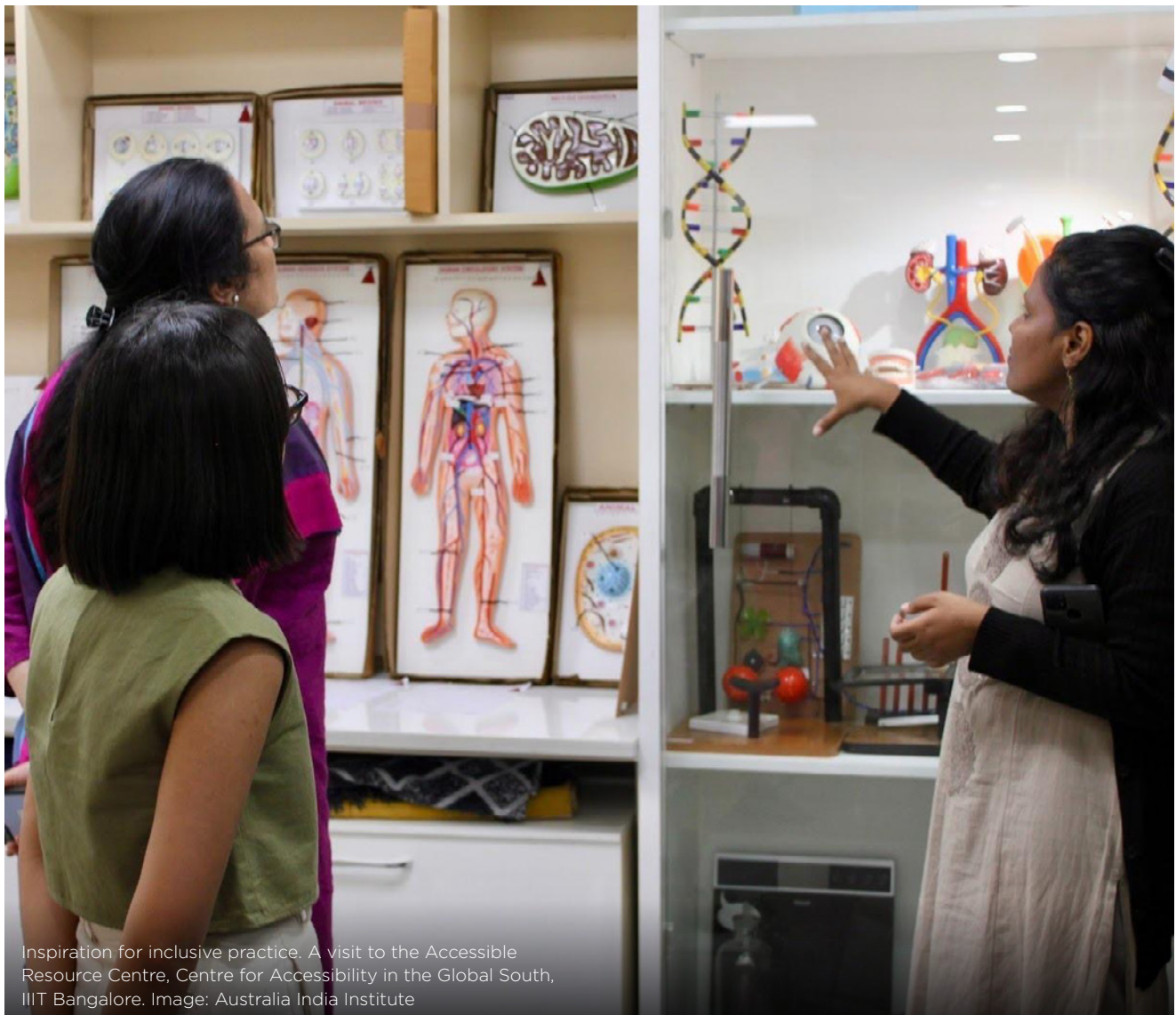
HYBRID WORKSHOPS

Two hybrid workshops involving over 160 participants - including teachers, school leaders, teacher educators and training organisations - were convened to inform the development of the Toolkit. The workshops - held in Bangalore and Melbourne between July and October 2025 - spotlighted experiences of schools with applied learning design and delivery, the role of a supportive ecosystem in facilitating these models, some of the core challenges, and opportunities for bilateral partnerships for advancing India's goals of integrating applied learning into school education.

SITE VISITS

The project team undertook a number of field trips to schools, secondary colleges, training bodies and civil society organisations in Bangalore and Melbourne. These visits provided innovative examples and practices of applied learning and teacher professional development across a diversity of education settings that have inspired the resources and approaches of the Toolkit.

Delhi Public School Bangalore North	Camberwell High School
Sambhav Foundation Bangalore	Kangan Automotive Centre of Excellence
Vision Empower, Accessible Resource Centre, IIITB	Mount Alexander College
Amba Centre	NCAT (Northern College of Arts and Technology)
DSERT Karnataka	The Gordon and Geelong Tech School
	Wyndham Tech School



Inspiration for inclusive practice. A visit to the Accessible Resource Centre, Centre for Accessibility in the Global South, IIIT Bangalore. Image: Australia India Institute

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