

Q CASE STUDY: CONNECTED LEARNING INITIATIVE

Context: Teachers working in rural and remote parts of India

Problem: Timetabling and workload constraints made it difficult for teachers who wanted to join a Community of Practice (CoP). They could not find convenient times to meet to enable everyone to participate equally or regularly.

Solution: Asynchronous CoP participation through a mobile messaging app

Connected Learning Initiative (CLIX) is a large-scale initiative connecting teachers in rural and remote parts of India. It seeks to effect practice transformation by moving beyond conventional one-time workshops. Instead CLIX uses Telegram Mobile based Messaging App (MMA) to establish a nationwide teachers' Community of Practice that is accessible, functional and relevant.

The MMA allows for affordable asynchronous communication. It does not depend on teachers being available at the same time and its convenience encourages teacher engagement. Teachers can showcase their practices using multimedia files sharing features such as videos, photos, voice notes. It gives them the agency to drive the Community of Practice's learning agenda. These features also facilitate interactions between teachers and experts (MMA administrators).

The continuous sharing created a sense of community and synergised energy. There is potential to further develop the community of practice into an epistemic community. There are limitations with the linear chat design, and it is currently not possible to classify and thematically organise the discussion threads. Nonetheless, the iterative processes employed by administrators ensures that the platform remains an active space for sharing innovative practices, discussions, feedback and reflection (Thirumalai & Sarangapani, 2023).

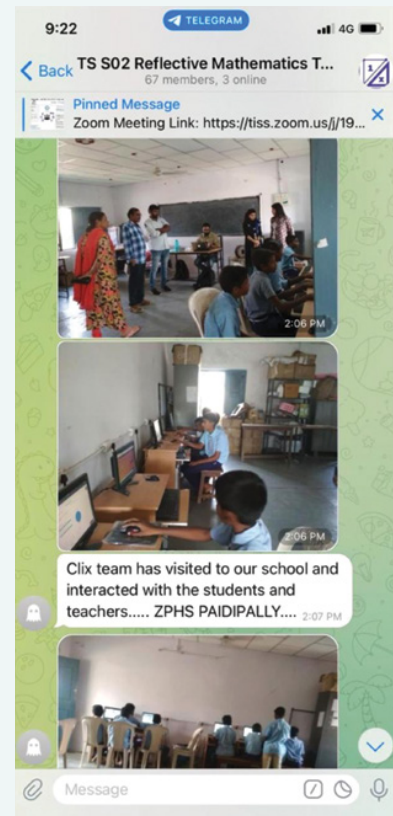


Image: TISS / Connected Learning Initiative (CLIX)





1.5. BUILDING PARTNERSHIPS THAT ENRICH STUDENTS' LEARNING

Applied learning thrives on collaboration between schools and industries, NGOs, and micro, small, and medium-sized enterprises (MSMEs). These partnerships lay the foundation for authentic, real-world learning, where external partners act as mentors or clients, presenting students with meaningful challenges and feedback.

Partnerships make it easier to plan, design and implement effective, structured experiences such as workplace immersions, mentorships and task-based field visits. These experiences expose students to professional standards, industry practices and diverse career pathways. They also allow students to test, refine and apply their knowledge in authentic environments.

Reflect on your current approach to partnerships. How often does your school collaborate with the local community to enhance applied learning? How can you as school leaders support your teachers' work in partnerships?



PRACTICAL TIPS

For leaders:

- Develop relationships with industry/NGOs that enable field visits, work-integrated learning (WIL) and internships.
 - » Explore memoranda of understanding (MoUs) or informal agreements that outline shared goals, responsibilities, and the structure of activities. This ensures learning experiences are well planned and mutually beneficial.
- Reflect and review partnerships regularly.
 - » After each collaboration, gather feedback from both students and partners. Identify what worked well and what could be improved for the next engagement.

For teachers (with leaders' support):

- Share assessment rubrics with industry / local partners for mid-point feedback.
 - » Invite professionals to review students' work and provide formative feedback. Their insights help students understand workplace standards and expectations.
- Use real workplace problems as assessment task prompts.
 - » Frame assessment tasks around actual industry or community challenges. This helps students anticipate future work scenarios and apply critical thinking to realistic tasks.
- Invite a local professional, parent or community expert to act as an informal client or reviewer for student projects. This fosters accountability and access to an authentic audience.

More detailed guidance on different dimensions of partnership can be found in the next sections of the Toolkit on Adapting Curriculum, Pedagogy and Partnerships.

BACKGROUND NOTES

A FRAMEWORK FOR APPLIED LEARNING

Applied learning should be seen as an important component of a successful school education ecosystem. It requires effective teaching, supportive school leadership, strong partnerships, and enabling policy settings.

An applied learning ecosystem highlights the relationships and conditions for student-centred learning that is inclusive and promotes positive engagement. It provides a framework for recognising opportunities, tackling challenges, developing realistic goals, and initiating effective plans for sustaining applied learning in school culture and teaching practice.

WHAT IS AN APPLIED LEARNING ECOSYSTEM?

The concept of a learning ecosystem in education draws on ideas in ecology to show the complex connections and relationships between people, institutions, places, and communities.

An applied learning ecosystem is created from the dynamic interactions between:

People – students, teachers, employers, members of the community, policy makers

Places – schools, workplaces, other organisations, community

Ideas – about how students learn, effective teaching, learning by doing.

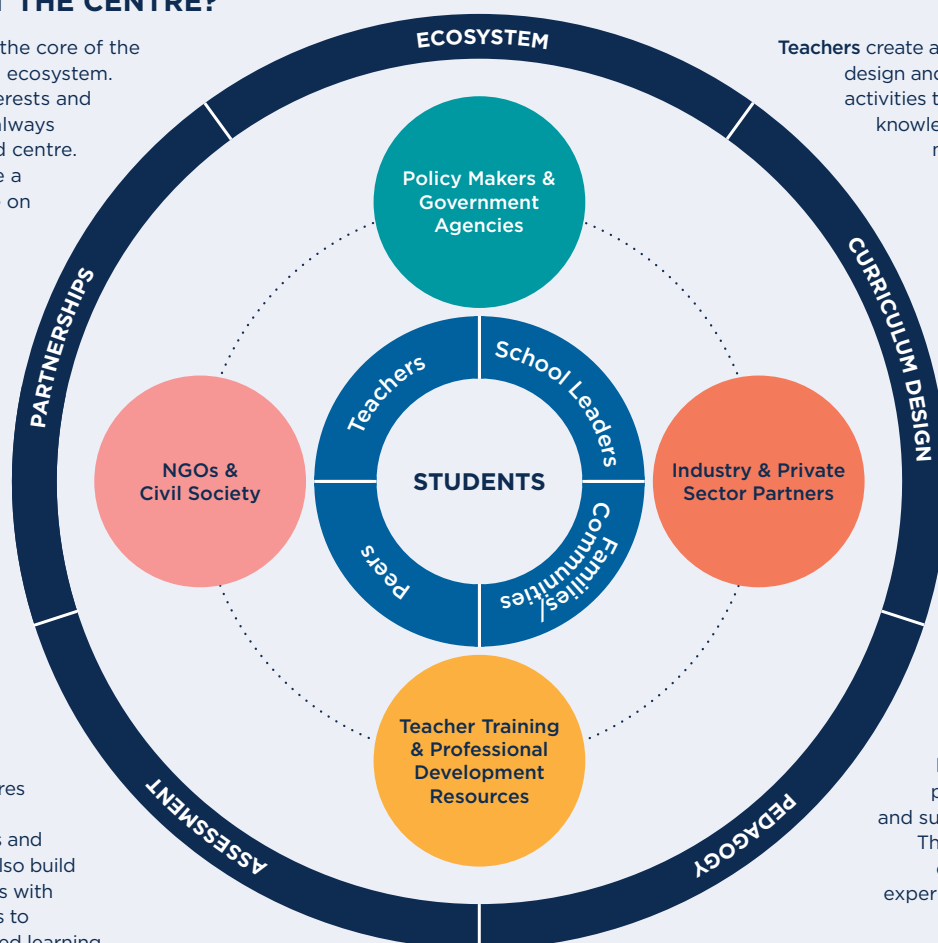
WHO IS AT THE CENTRE?

Students are at the core of the applied learning ecosystem. Their needs, interests and potential must always remain front and centre. Their peers have a strong influence on their learning.

Teachers create a safe environment, design and facilitate learning activities that build skills and knowledge. They nurture, monitor and assess students' progress and personal development.

School leaders establish and maintain structures that support the work of teachers and students. They also build essential linkages with external partners to strengthen applied learning.

Families and local communities provide motivation and support to students. They also contribute expertise, industry experience and learning opportunities.



CHANGING POLICY, PRACTICE AND ATTITUDES

There are many theories of change that seek to understand how shifts in policies and practice can be achieved in education (Cairney, 2021). Educational change is a highly complex and dynamic process that requires collaborative and iterative approaches (Hecht & Crowley, 2020). School leaders need to clearly understand the opportunities, obstacles, and their sphere of influence within the learning ecosystems so that they can identify the avenues available to them to manage change and effectively implement applied learning.

STEP 1

The first, most critical step for school leaders is to understand the complex social and cultural attitudes towards applied learning. Across education systems and labour markets globally, academic and applied learning are often positioned differently, even in contexts where applied learning is well regarded (Hoskins et al., 2016). A productive approach is to emphasise the distinctive strengths of applied learning and its role in enriching academic learning. When integrated effectively, applied learning enhances understanding, supports stronger performance, and builds students' confidence and capability.

STEP 2

School leaders need to articulate clearly to the school community how applied learning complements inclusive education goals by offering diverse ways for students to engage with learning and demonstrate their understanding. India has made inclusive education a major priority. The Indian Right to Persons with Disabilities (RPWD) Act 2016 addresses physical, academic, and teaching material access to education at all levels, from classrooms and laboratories to textbooks and technology aids. School leaders should ensure that all applied learning initiatives and practices are inclusive and compliant with the intent and purpose of the RPWD Act 2016.

The Indian Right to Persons with Disabilities (RPWD) Act of 2016 reflects the spirit of the United National Convention on the Rights of Persons with Disabilities (UNCRPD) and its emphasis on a bio-psycho-social model of disability. The RPWD Act also provides for creation of an enabling social environment which is inclusive and free from negative stereotypes and biases towards persons with disabilities.

Guidelines on accessibility, adaptations and reasonable accommodations have been formulated by various national and state level educational agencies in India. School leaders and teachers should use these guidelines to guide with inclusive design of applied learning. This will minimise the need for subsequent adjustments and ensure that persons with disabilities do not miss out on the opportunities made available through applied learning courses and programmes (see Additional Resource links).

Inclusion is a core principle of this Toolkit, framing each chapter and the design of tools.

STEP 3

School leaders should instill awareness within the school community about the importance of applied learning in the context of the growing use of both traditional and generative artificial intelligence (Gen AI) in education and work (Nguyen & Tuamsuk, 2022; UNESCO, 2023). As digitisation and automation reshape how work is defined, valued and organised, students are increasingly expected not only to acquire knowledge but to apply it in authentic, complex and technology-rich contexts. Applied learning provides a powerful context for developing this capability, as it emphasises problem solving. Solving problems relies on judgement, collaboration, critical thinking and reflection, which cannot be outsourced to AI.

School leaders play a key role in equipping teachers with the professional capabilities to integrate applied learning across subjects and year levels. This includes guidance on how teachers can promote the thoughtful and responsible use of AI as a learning tool rather than a substitute for learning.

UNESCO'S FIRST GUIDANCE FOR GENERATIVE ARTIFICIAL INTELLIGENCE:

- looks into what Gen AI is and how it works, presenting the diverse technologies and models available
- identifies a range of controversial ethical and policy issues around both AI in general, and Gen AI specifically
- discusses the steps and key elements to be examined when seeking to regulate Gen AI based on a human-centred approach – one that ensures ethical, safe, equitable and meaningful use
- proposes measures that can be taken to develop coherent, comprehensive policy frameworks to regulate the use of Gen AI in education and research
- looks into the possibilities for creatively using Gen AI in curriculum design, teaching, learning and research activities
- explores long-term implications of Gen AI for education and research

The full report is available on open access at:

<https://unesdoc.unesco.org/ark:/48223/pf0000386693>

HOW CAN TEACHERS BUILD PARTNERSHIPS THAT ENRICH STUDENTS' LEARNING?

When learning extends beyond the classroom, it connects students with the world they are preparing to join (NCF 2005, NCF 2023). Applied learning thrives on collaboration between schools and industries, NGOs, and micro, small, and medium-sized enterprises (MSMEs). These partnerships lay the foundation for authentic, real-world learning, where external partners act as mentors or clients, presenting students with meaningful challenges and feedback.

To make partnerships effective, curriculum design must include structured experiences such as workplace immersions, mentorships and task-based field visits. (NEP 2020). These experiences expose students to professional standards, industry practices and diverse career pathways. They also allow students to test, refine and apply their knowledge in authentic environments that matter.

Establishing and sustaining school-industry partnerships can be complex and time-consuming and cannot be left to teachers alone. This is where an applied learning ecosystem perspective is crucial, with school leaders stepping in to provide strategic and administrative support needed (Perry 2025). See resource 1.5 and the final Partnerships section of this Toolkit.

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ADDITIONAL RESOURCE LINKS

Advocacy

National Skills Network (India). <https://nationalskillsnetwork.in/a-decade-of-nsn-the-platform-for-skills-applied-learning-and-work-integrated-education/>

- An online platform advocating for skills, applied learning and work-integrated education, providing regular updates on policy and opportunities, offering video resources including explainers and student stories.

NSW Department of Education (Australia). Vocational Pathways VET Ambassadors: <https://education.nsw.gov.au/schooling/students/career-and-study-pathways/educational-pathways-program/program-initiatives/vet-ambassadors>

- Advocacy for vocational learning in the form of professionally produced video interviews with students accompanied by textual educational narratives. A useful model for shifting the conversation on what constitutes educational success.

Artificial intelligence in education

OECD (2025). Schools + networks. <https://www.oecd.org/en/about/projects/schools-network.html>

- A project connecting school leaders, teachers and education experts to respond to improve teaching practice and create necessary environmental support. 'The teaching of tomorrow' resources outline implications of generative AI. Invites schools to join their Schools Learning Circle.

UNESCO (2025). Artificial intelligence. <https://www.unesco.org/en/digital-education/artificial-intelligence>

- UNESCO website providing practical support and policy guidance for the development of an ethical, human-centred approach to artificial intelligence. Includes a competency framework for students and teachers.

Ecosystem thinking

CommLab India (2024) *Transforming Your Learning Ecosystem: A Roadmap to Success*. <https://www.youtube.com/watch?v=SFtjW2NLyo>

- Short video on learning ecosystems for organisations other than schools. Shows how to draw an ecosystem road map which can inform the development of a school-level professional development plan.

OECD (2025). *Unlocking High-Quality Teaching*. OECD Publishing. <https://doi.org/10.1787/f5b82176-en>.

- Website and accompanying report outlining evidence-based practices supporting high quality teaching. The focus is not on applied learning specifically but many of the report's insights are relevant. It recognises the complexity of teaching and offers practical steps to develop a healthy learning ecosystem.

UNESCO Learning Ecosystems. <https://www.uil.unesco.org/en/learning-ecosystems>

- Website identifying three pillars of lifelong learning ecosystems: (1) content, (2) technology, digitization and AI, and (3) educators. Links to a research project on teacher professional development.

Models for supporting workplace learning and partnerships between schools and employers

NSW Education Department. Work placement Coordination Program. <https://education.nsw.gov.au/teaching-and-learning/curriculum/career-learning-and-vet/workplace-learning/work-placement-coordination-program>.

- Schools in the Australian state of NSW are supported by Work Placement Service Providers, not-for-profit organisations contracted by government to coordinate mandatory work placements for senior secondary students in applied learning subjects.

VicLLENs (Victorian Local Learning and Employment Networks). Guiding Young Victorians into Employment. <https://www.vicllens.org.au/>

- A successful model of government-funded support for school - employer liaison and coordination. Local Learning and Employment Networks (LLENs) in the Australian state of Victoria support structured workplace learning, help facilitate mentoring, work placements and exposure for students to different career opportunities.

Victorian Department of Education (2025). Tech Schools. <https://www.vic.gov.au/tech-schools>

- Government-funded Tech Schools in the Australian state of Victoria provide a hub for schools in their region, offering high-tech, hands-on STEM programs for secondary students. They also support professional learning and a digital community of practice for teachers.

Peer networks and communities of practice

British Council. (2024). Teachers' Communities of Practice: a Toolkit. https://www.britishcouncil.in/sites/default/files/teachers_communities_of_practice_a_toolkit_for_teachers.pdf

- Theory, practice and tools for establishing and sustaining Communities of Practice for teachers, including professional development activities.

Education Week (2023). Tips From Acclaimed Teachers: Building a Network of Supportive Peers. <https://www.youtube.com/watch?v=mbyGxWrHJKw>

- 2023 State Teachers of the Year provide tips on how to build connections with peers and mentors in a short video. Produced in the USA but adaptable to other contexts.

UCL (London) Arena Centre (2024). Teaching Toolkit resource. Constructive conversations to improve teaching. <https://www.ucl.ac.uk/teaching-learning/publications/2024/sep/constructive-conversations-improve-teaching>

- Useful guidance on engaging in dialogue with peers to improve teaching practice. Created for university teachers but adaptable to secondary settings.

Wenger-Trayner, E. and B. (2015). Introduction to communities of practice: a brief overview of the concept and its uses. <https://www.wenger-trayner.com/introduction-to-communities-of-practice/>

- Outlines different forms CoPs can take and three essential characteristics: 'domain', 'community' and 'practice'. Demonstrates different ways of enacting these across a range of sectors and busts myths about CoP.

Skills education (government policy and resources)

Ministry of Skill Development and Entrepreneurship (MSDE). <https://www.msde.gov.in/en>

- Website for the Ministry leading and coordinating all national skill development efforts. Oversees vocational training systems and works with ministries, state governments and global partners to strengthen the skill ecosystem. Provides clarity on national skill priorities, industry standards, and partnership opportunities.

Ministry of Education (MoE). <https://www.education.gov.in/en>

- Provides information about national education policies and priorities, schemes to improve access and quality, curriculum frameworks, teacher development, digital learning, and vocational education initiatives.

National Education Policy (NEP) 2020 https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf

- Presents India's vision for transforming school education through experiential, competency-based, and multidisciplinary learning. It outlines pathways for integrating skills, flexibility, and real-world exposure across all stages. Essential for those aligning curriculum design with national reforms.

Samagra Shiksha. <https://samagra.education.gov.in/>


- National framework for implementing work-integrated education in schools, including modules, operational guidelines, and support structures. It also highlights funding opportunities and program implementation details.



2 ADAPTING CURRICULUM TO APPLIED LEARNING

Namaste, teachers! This element prepares you to build applied learning projects that give your students real-world exposure and community engagement. It shows how to adapt existing curriculum for applied learning by integrating classroom teaching with practical experiences that encourage innovation, reflection, and collaboration. The element offers different scenarios and practical tips for helping students connect their learning with current day work realities. It also includes a self-assessment tool for teachers to identify strengths and opportunities in applied learning.

Resources include:

- 2.1. Teacher collaboration for strengthening applied learning
 - 2.2. Making curriculum relevant to local needs
 - 2.3. Flexible design for inclusive learning
 - 2.4. Self-assessment tool for teachers to identify strengths and opportunities in curriculum design
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2.1. TEACHER COLLABORATION FOR STRENGTHENING APPLIED LEARNING

Strong teacher collaboration lies at the heart of meaningful applied learning experiences. When you plan together as teachers, you can identify common goals, share expertise and develop authentic projects that reflect how problems are solved outside school. This collaborative approach also supports curriculum mapping, reducing content overlap, aligning schedules and keeping students engaged through practical, relevant learning.

Take a moment to think about your own practice before reading the scenario below. These guiding questions will help you reflect on what is already working and where small changes could make collaboration more effective.

QUESTIONS / ARE YOU WONDERING?

How can I plan proactively with colleagues to make interdisciplinary projects manageable?

What adjustments to the timetable are needed to balance fieldwork with classroom learning?

Are students receiving enough time and support to complete practical tasks successfully?

How can I integrate case studies or best practices into future planning?





SCENARIO: COORDINATION FOR INTERDISCIPLINARY FIELD VISIT

Context: Chemistry and Environmental Science teachers in a higher secondary school

Problem:

- Lack of coordination when planning field visits
- Lost opportunities for interdisciplinary learning
- Teachers and students overloaded

In a higher secondary school, a Chemistry teacher planned a project to analyse industrial effluent data, while the Environmental Science teacher scheduled a one-week field visit to a water treatment plant. Both aimed to extend learning beyond the textbook but faced timetable clashes and limited time for practical work.

After negotiating with other departments, they managed to conduct the field study, yet students felt overloaded and struggled to complete post-school assignments.

Solution: Better coordination and proactive planning would make these applied projects more effective and manageable for both students and teachers.

With a shared plan, both teachers could have developed one interdisciplinary project connecting chemistry concepts with environmental responsibility while managing time and effort more efficiently.



PRACTICAL TIPS

- A digital platform or regular planning sessions for school teachers to notify each other of field visits/excursions/innovative classes and explore opportunities for collaboration.
 - » Identify overlaps where two or more classes can link activities, share resources, or run a joint session to enrich students' learning experiences.
- Co-design learning tasks for related subjects that meet the outcomes identified in the set curriculum.
 - » Work collaboratively to create learning activities that combine subject knowledge with applied skills. This helps students understand how solutions to real-world challenges are inherently interdisciplinary.
- Build a shared visual map of the learning progression.
 - » Use a digital tool or visual chart to map where key knowledge and skills are introduced and reinforced. This prevents duplication and ensures steady progression of learning across grades.
- Allocate dedicated time for joint planning.
 - » Schedule regular planning sessions and coordinate with school leadership to allow timetable adjustments for project-based or interdisciplinary work.
- Use rubrics early to clarify expectations and guide student feedback.
 - » Develop rubrics before starting a new topic and link the rubric to the intended learning outcomes and/or key components of an authentic assessment task.
 - » Review sample work to align understanding of proficiency levels and assessment consistency (see Assessment resources 20 - 21 for guidance on rubric development).
- Document collaborative sessions for reflection and improvement.
 - » Keep short summaries or digital notes from planning meetings. These help to track decisions, follow-up actions and good practices for future reference.

Teacher collaboration matters because it enables interdisciplinary projects, works to minimise learning gaps and supports more seamless skill progression across grades. An applied learning approach focuses on the application of knowledge and mastery of skills rather than content coverage.

DO TEACHERS REALLY HAVE TO STEP OUTSIDE THEIR SUBJECT AREA?



SCENARIO: BUILDING INTERDISCIPLINARY CONNECTIONS FOR REAL IMPACT

Context: Higher secondary Physics students were measuring solar panel efficiency as part of a unit on renewable energy systems. Meanwhile, in Geography, students explored the role of non-conventional energy in sustainability and climate action.

Problem: Both classes included projects and field visits, yet because the activities ran separately, students missed the connection between technology (renewable energy) and community responsibility (sustainability).

Solution: If the Physics and Geography teachers had planned a shared project such as “Solar Energy for Our School,” both disciplines could have deepened understanding and produced tangible results. Students could have analysed energy data, proposed solutions, and built a prototype – linking scientific inquiry with civic action through a singular applied learning experience.



PRACTICAL TIPS FOR BUILDING INTERDISCIPLINARY CONNECTIONS

Choose a strong central theme or project that connects at least two subjects.

- Identify authentic problems that require input from more than one discipline (e.g. renewable energy, water management or sustainable cities).

Align each subject's learning goals to contribute to the shared challenge.

- Discuss with colleagues how outcomes from each subject complement the project so that learning remains purposeful and balanced.

Explicitly assess future-ready skills such as problem-solving and collaboration.

- When designing authentic assessment tasks, include assessment criteria that reward teamwork, initiative and creativity, encouraging students to apply what they know while learning from others.

Show how concepts connect across disciplines and careers.

- Use real-world examples, for instance, how a solar technician benefits from understanding environmental science, to broaden students' perspective on the world of work.
- Attend Continuous Professional Development (CPD) sessions that focus on interdisciplinary teaching and future skills. These help you link subject knowledge with broader real-world contexts.



2.2. MAKING CURRICULUM RELEVANT TO LOCAL NEEDS

For applied learning to be meaningful and effective, it needs to connect with students' interests and their local context. Designing activities around community needs, real data, and cultural relevance helps students see how applying knowledge can make a genuine difference.

Pause to consider how your current lessons connect with students' lives. The questions below will help you identify where small contextual shifts can make learning more relevant before you read the scenario.

? QUESTIONS / ARE YOU WONDERING?

What local issues or community needs could connect with my subject area?

How can I make learning activities more relevant to students' everyday lives?

Who in the community could contribute knowledge, experience, or mentorship?

How can I help students apply theory to analyse or solve local problems?





SCENARIO: LOCAL CONSUMER RIGHTS AUDIT

Setting: Higher secondary Legal Studies Class on Consumer Protection Act 2019

Problem: Students study consumer rights theory in their legal studies subject. In the local community, *kirana* (grocery) shops and vendors have limited awareness of the Consumer Protection Act 2019. Many of these shops and vendors lack clear pricing and return policies, which results in minor disputes on a daily basis. This reveals a disconnect between the law and what is happening in the local area.

Solution: The teacher developed a task for the class, which involved working on a 'Consumer Compliance Simplified' project. There were three main parts:

1. The students audited local vendors to identify common gaps in their understanding of the Consumer Protection Act 2019 and the kinds of disputes they experience.
2. The students consulted a local advocate to clarify key legal provisions.
3. Students prepared a *Simplified Compliance Checklist* and a *Know Your Rights* flyer, both in the local language. These were distributed to *kirana* shop owners and vendors with the aim of increasing compliance with statutory law and improving retail transactions in the local community.



PRACTICAL TIPS

- Include at least one local project every semester.
 - » Choose issues that relate to students' surroundings such as local business practices, environmental changes, or cultural events. This helps to make learning personal and relevant.
- Enhance textbook content with local data or surveys.
 - » Even when working within a prescribed syllabus, where possible, replace textbook examples with local data, community case studies or statistics that students can access and verify.
- Link global themes to local experiences and traditions.
 - » Show how global ideas such as sustainability, innovation or digital literacy apply in students' neighbourhoods, encouraging them to think globally and act locally.
- Invite local experts to mentor or review student work.
 - » Professionals, parents, and community members can offer valuable feedback and contextual insights, turning school projects into authentic experiences.

Making curriculum relevant to the local area can support engagement by making abstract concepts relevant and useful through application to the real world. Activities that have a visible impact on the local community create authentic learning experiences and encourage civic responsibility.

HOW CAN WE ADAPT CURRICULUM TO ENHANCE STUDENT ENGAGEMENT?

Curriculum design should create opportunities for students to have a voice in what they learn, how they learn and how they demonstrate their learning. When students make choices about topics, they take greater ownership of both process and outcomes.

Think about how much choice your students currently have in learning or assessment. Use the questions below to reflect on how you could strengthen their sense of ownership then read the scenario.

? QUESTIONS / ARE YOU WONDERING?

How can I introduce small but meaningful choices within the classroom and/or assessment activities?

What opportunities can I create for students to set criteria for success?

How can self- and peer assessment become regular parts of classroom practice?

In what ways can students' interests influence project topics or outputs?



SCENARIO: INCREASING STUDENT ENGAGEMENT

Context: A senior secondary Business Studies and Entrepreneurship class.

Problem: Students created marketing plans for a fictional holiday resort, following the lesson plan exactly as prescribed. Because they had different interests, most students felt compelled to complete the task rather than inspired by it.

When teachers later reviewed performance, many students said they found the topic uninteresting and wanted a say in future assignments.

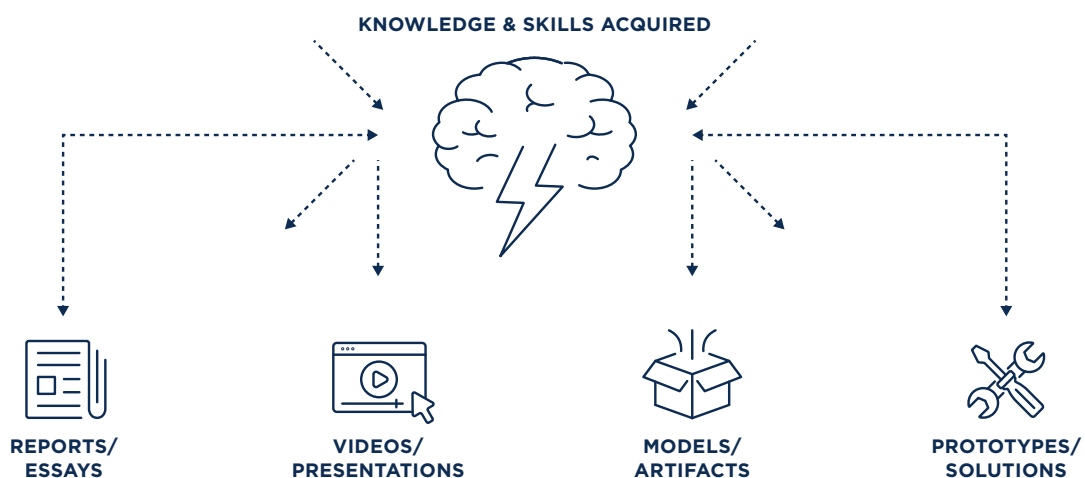
Solution: Based on this feedback, the teachers introduced project options for upcoming units and involved students in planning and decision-making. Engagement increased and students took greater pride in their work.

PRACTICAL TIPS

A well-designed applied learning curriculum gives students greater ownership and autonomy in their learning. Offering students a degree of choice and highlighting the relevance of what they are learning can strengthen motivation. Applied learning can develop students' ability to reflect on their learning, strengthen accountability and build confidence.

- Offer three to five real-world challenges and let students choose the topic of most interest.
 - » Involve students from a range of different backgrounds in the design of the real-world challenges.
- Keep key skills and learning outcomes consistent across all options.
 - » Focus on the application of knowledge and skills to real-world problems requiring research, analysis, or design.
 - » Collaborate with colleagues to ensure core curriculum expectations can still be met.
- Provide multiple formats for presenting final work.
 - » Offer options like reports, videos, models, or prototypes to suit varied interests and encourage creativity in demonstrating knowledge and skills acquired.

MULTIPLE FORMATS FOR FINAL WORK



- Include structured self-assessment and reflection activities.
 - » Encourage students to use rubrics to evaluate their progress and reflect on what they learned about both content and process, along with what steps they can take to continue building their knowledge and skills.
- Create feedback loops that involve students.
 - » Use short review sessions or digital polls to capture student voice after each learning/assessment activity and adjust upcoming tasks accordingly.
- When topics are pre-decided, offer students the freedom to select the example (or issue) they wish to explore, and use rubrics to reflect on their progress.



2.3. FLEXIBLE DESIGN FOR INCLUSIVE LEARNING

Flexible learning expands access to education through the provision of multiple pathways through and beyond school. It provides opportunities to build the confidence and autonomy of students with different abilities. Flexible learning promotes equity by valuing different ways of knowing and doing within a framework that ensures students develop the capacities they need to flourish in both work and their larger community.



PRACTICAL TIPS

- Present content in multiple formats.
 - » Combine text, visuals, models and videos so that students can access ideas through different sensory and cognitive pathways.
- Use outcome-based rubrics and provide students with at least three options to demonstrate their learning.
 - » Let students choose from reports, prototypes, presentations, or portfolios to match their abilities and comfort levels.
 - » Ensure you use an outcomes-based rubric to ensure fairness across different assessment tasks.
- Design scaffolded learning tasks to address different readiness levels.
 - » Adjust complexity and support without lowering expectations. This ensures that every learner can succeed at an appropriate challenge level.
- Provide timely, constructive feedback throughout the project.
 - » Regular feedback helps identify barriers early and allows you to adjust strategies to support continuous improvement.
- Use assistive tools and peer collaboration.
 - » Encourage technology use where appropriate and peer support systems so learners can access, express and engage in inclusive ways.



CASE STUDY: MODEL APPLIED LEARNING CURRICULUM FOR STUDENTS WITH VISUAL IMPAIRMENT

To prepare students to participate creatively in the digital age, ACM (Association for Computing Machinery) India has created a model curriculum to introduce Computational Thinking (CT) in schools through their CSpashshala initiative (cspathshala.org).

Over the past few years, Vision Empower (VE) has worked along with Microsoft Research India and IIIT-Bangalore to make CT accessible to children with visual impairment in special schools for the blind across India. To this end, VE has leveraged the play-based Ludic Design for Accessibility approach and designed multiple games covering concepts related to data, discrete modelling, estimation, measurement, number patterns, quantity discrimination, shapes and spatial understanding etc. Most of the games are modified versions of games popular in different regions of India, such as hop scotch, ludo, rummy, snakes & ladders, treasure hunt and many more.

In this flexible pedagogical technique, learning happens while the children play the game and improve their proficiency to negotiate through more difficult variants. The teacher assumes the role of an expert player and plays alongside the students. A list of these accessible CT games with detailed play plans and associated instructions is available on the Vision Empower site: visionempowertrust.org/ct-games.



2.4. SELF-ASSESSMENT TOOL FOR TEACHERS AND SCHOOL LEADERS TO IDENTIFY STRENGTHS AND OPPORTUNITIES IN CURRICULUM DESIGN

Key: [T] = teachers [SL] = school leaders

Area	Checklist: Have you....	Taking stock		Priority	
		Yes	Not yet	Immediate	Long term
Collaboration and planning	[T] Connected with teachers of other subjects to co-design applied learning units and share learning outcomes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	[T / SL] Organised meetings to map the curriculum and identified the changes in the timetable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	[SL] Scheduled joint planning sessions to allow flexibility for project-based or field learning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Integration and interdisciplinary learning	[T / SL] Evaluated a wide range of options across disciplines to come up with few combinations of subjects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	[T] Prepared a list of ideas for interdisciplinary projects that can be included in applied learning curriculum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	[T/ SL] Identified the goals of interdisciplinary projects and the dependencies on people and infrastructure to make it successful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local relevance and community context	[T] Made a list of local issues that can be aligned with specific units in the curriculum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	[T/ SL] Curated a list of projects that can be customized to local needs, or address community issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	[SL] Invited local expert(s) from industry and civil society to assess, review and mentor during the project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Student agency and engagement	[T] Encouraged students to make choices about what or how they learn at strategic points	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	[T] Involved the students and included their inputs while designing authentic assessment tasks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Partnerships and industry links	[SL] Identified local connections like business establishments, non-government and/or community organisations to partner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	[T / SL] Planned for workplace immersions, mentorships, or field visits as per the applied tasks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inclusion and flexibility	[T] Re-designed learning tasks to make them flexible and accommodate multiple modes of participation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	[T] Included strategies and tiered activities used to support learners with different readiness levels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	[T / SL] Initiated formative feedback focused on diverse learning needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Review and improvement	[SL] Conducted periodic reviews of the curriculum using feedback from students and partners	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	[T] Reflected on practice and shared examples of applied learning implementation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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BACKGROUND NOTES

APPLIED LEARNING CURRICULUM

A curriculum is more than a set of textbooks or lesson plans. A curriculum is mediated by teachers and explored by students as a lived experience (Campbell 2008; McConnell et al. 2020). A living curriculum provides students with a wide range of organized learning experiences that are geared towards achieving educational aims and objectives.

It is useful to think of curriculum as a dynamic interaction of content, pedagogy, and experiences of the school community (students, parents, leaders, teachers) within a particular cultural and sociopolitical environment. These interactions can be seen at three levels (Male, Waters & Dunford, 2012):

- National or State Framework: the curriculum as set out by the nation or state
- Institutional Mediation: the curriculum as mediated by the school or teachers for students in the school or class
- Learner Experience: the curriculum as experienced by the students

The school's curriculum is shaped by the crucial process of mediating and interpreting external expectations for local relevance.

A dynamic curriculum includes the following key elements (NCF 2023)

- Goals and objectives
- Syllabi
- Content to be taught and learnt
- Pedagogical practices
- Assessment
- Teaching-learning materials
- School and classroom practices
- Learning environment
- Culture of the institution

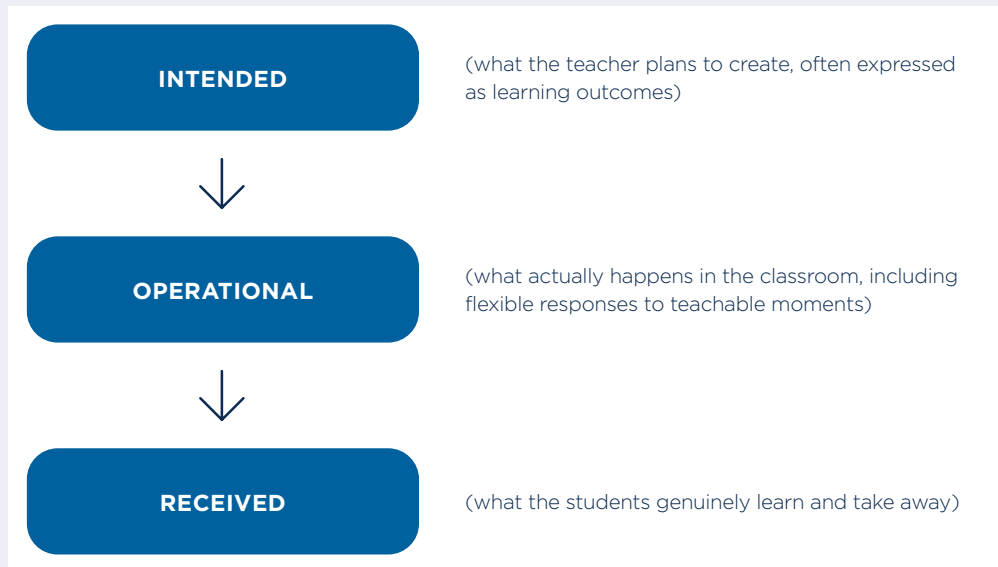
An applied learning curriculum should be:

- experiential (Kolb 1984), providing purpose, direction, and application of knowledge
- contextual, ensuring relevance to real life, especially working and community life
- personal, meeting the learners' individual needs (Ovenden-Hope and Blandford 2017).

India's National Curriculum Framework for School Education 2023 recommends exposure to real-life work in secondary and higher secondary levels. It makes a strong case for interdisciplinary approaches to curriculum design, with a focus on addressing local needs of the community and industry. This establishes the need to adapt curriculum and align it with applied learning goals. Central and state school boards have a crucial role to play in adapting relevant curriculum to advance applied learning.

The Relevant, Engaging, Active Learning (REAL) framework (Ovenden-Hope and Blandford 2017) is useful both for designing a new curriculum and adapting an existing curriculum to incorporate applied learning experiences that are experiential, contextual, and personal. This can include teaching and learning strategies such as problem-based learning and real-world creative challenges (Male 2012). The design must provide learners with choice in their activities and opportunities to actively co-construct their learning experiences.

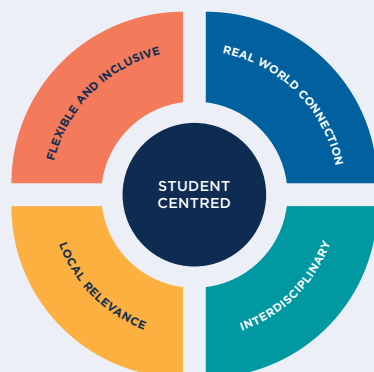
When designing or adapting a curriculum for applied learning, it is important to recognise that teaching involves three types of curriculum: intended, operational and received. Comparing the intended and operational curricula provides vital feedback for improving teaching practice and ensuring that the received curriculum increases genuine learning for students (McConnell et al., 2020).



APPLIED LEARNING CURRICULUM ADAPTATION

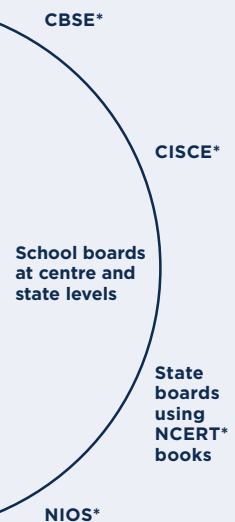
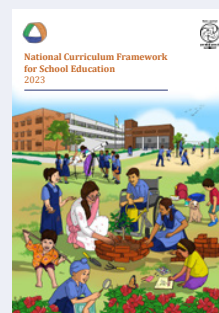
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This diagram highlights the core principles of curriculum adaptation for applied learning in alignment with existing Indian curriculum frameworks.



ALIGNMENT WITH NCF SE 2023

- Localised and aspirational curriculum
- Exposure to different forms of work in real life situations
- Equity and inclusion
- Value working with hands
- Learning outcome based curriculum as outlined in National Skills Qualification Framework (NSQF)
- Provide hands on experiences
- Interdisciplinary approach in curriculum design



*Central Board of Secondary Education (CBSE)

*Council For The Indian School Certificate Examinations (CISCE)

*National Institute of Open Schooling (NIOS)

*National Council of Educational Research and Training (NCERT)

HOW DOES TEACHER COLLABORATION STRENGTHEN APPLIED LEARNING?

As a teacher, you play a central role in shaping meaningful applied learning experiences. Strong collaboration among teachers forms the foundation for this work. It begins with a shift from isolated subject teaching mainly focused on covering subject matter for tests and examinations, to finding ways of designing or adapting a curriculum so that classroom concepts are integrated with real-world applications.

Start by reflecting on your existing curriculum (Grundy 1987). Ask yourself how classroom content can help students prepare for situations beyond school, in their communities, future studies, or the world of work. For example, traditionally you may have taught a social sciences subject by providing facts, categories, statistics, issues, events, and so on. With applied learning, you can adapt your lessons to create scenarios centred on local issues, still based on the same core elements. You can then have students design solutions, explore civic responsibility, develop a public awareness campaign. Such activities allow students to see how they can apply their learning to create real impact.

When you plan together as teachers, you can identify common goals, share expertise and create authentic projects that reflect how problems are solved outside school. This collaborative approach also supports curriculum mapping, helps to reduce content overlap and schedule clashes and keeps students engaged through practical, relevant learning. See resource 2.1.

Even within a fixed curriculum, teachers can co-design small-scale applied scenarios that connect lessons with real-world contexts.

Assessments, too, benefit from collaboration. When you and your colleagues co-design rubrics, expectations become consistent across subjects. Students understand what success looks like and receive constructive, formative feedback that improves performance (see Assessment element).

When planning collaboratively with your colleagues, you could explore together whether digital and AI-enabled tools make certain processes more efficient. Teachers are increasingly using AI-enabled tools to brainstorm, generate draft rubrics and assessment tasks, or check alignment between learning outcomes and activities. AI tools can also be used to make curriculum maps and validate whether project tasks address intended skills and knowledge. You need to test such tools with care and critically evaluate the outputs, drawing on your combined professional and pedagogical knowledge and experience to determine their quality and usefulness.

DO TEACHERS REALLY HAVE TO STEP OUTSIDE THEIR SUBJECT AREA?

Real world problems rarely fit within one subject. A defining feature of applied learning is its interdisciplinary approach. Ideally an applied learning curriculum will connect disciplines such as Mathematics and Science, Humanities, Arts, Technology, and Commerce. Cross-disciplinary projects can create richer and more authentic learning experiences (Edelbroek, Mijnders and Post, 2018.)

When you design learning around shared themes or projects, students view concepts through multiple lenses. This makes learning multi-dimensional and helps them see how theory applies to real, complex issues. Working across disciplines also builds essential life and work-related, transversal skills such as teamwork, collaboration, communication, problem-solving and critical thinking (San-Epifanio and Filibi 2023).

If you are adapting an existing curriculum for applied learning and find it difficult to design such cross-disciplinary projects, you can still explore with your colleagues how to make students aware of the different disciplinary dimensions of a particular real-world issue. You and your colleagues can discuss these aspects with students in the subjects you teach.

See resource 2.1 for tips on how you can build interdisciplinary connections for real impact.

HOW CAN WE MAKE CURRICULUM RELEVANT TO LOCAL NEEDS AND ENHANCE STUDENT PARTICIPATION?

For applied learning to be meaningful and effective, it needs to connect with students' interests and their local context (Ovendon and Hope 2018). Designing activities around community needs, real data, and cultural relevance helps students see how applying knowledge can make a genuine difference.

When abstract concepts are translated into practical action for community improvement, learning becomes purposeful. This approach builds a strong connection between school and society. It helps students become informed, active citizens who can adapt global understanding to address local challenges. Local examples make lessons relatable and give students a sense of ownership in developing solutions that matter (Stanley 2018).

Engaging with community voices, such as professionals, entrepreneurs, or cultural practitioners, can also enrich learning. These partnerships bring authenticity to lessons and help teachers design activities and assessments grounded in real-life situations. See resource 2.2.

HOW CAN WE ADAPT CURRICULUM TO ENHANCE STUDENT ENGAGEMENT?

Student agency lies at the heart of applied learning. It transforms students from passive recipients of information into active participants who shape their own learning journeys (Lee et al. 2026).

Curriculum design should create opportunities for students to have a voice in what they learn, how they learn and how they demonstrate their learning. When students make choices about topics or products, they take greater ownership of the learning process and of the work they create.

Agency and accountability go together. One approach is to have students use rubrics to assess their own and peers' work. Empowered learners are more motivated, creative, and reflective, producing higher-quality work and developing lifelong learning skills (Kirk et al. 2017). See resources 2.2, 3.1-3.2, 3.7-3.8.

HOW CAN FLEXIBLE DESIGN MAKE LEARNING MORE INCLUSIVE?

An applied learning curriculum is an ideal framework for inclusiveness because it values what students can do, not just what they know. An inclusive curriculum ensures that every learner, regardless of background, ability, or preferences, can participate and demonstrate mastery.

When students are given multiple ways to engage, express and reflect, learning becomes equitable and empowering. By building in flexibility, teachers create opportunities for **every** learner to experience success and contribute meaningfully to collaborative tasks. It creates a supportive space for students with different psychosocial learning needs to gain experience from applied learning (Koh, ed., 2020). See resource 2.3.

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ADDITIONAL RESOURCE LINKS

Curriculum frameworks and guidelines

National Curriculum Framework (NCF) 2023 - Chapter 9. https://www.education.gov.in/sites/upload_files/mhrd/files/infocus_slider/NCF-School-Education-Pre-Draft.pdf

- Provides updated curricular expectations that reflect NEP's emphasis on flexibility, integration, and experiential learning. Chapter 9 explains how work-based learning, internships can be woven into school education.

National Curriculum Framework (NCF) 2005. <https://ncert.nic.in/pdf/nc-framework/nf2005-english.pdf>

- This foundational framework introduced learner-centred, activity-based, and experiential pedagogies that shaped India's modern curriculum thinking. It emphasises real-life connections and holistic development.

National Credit Framework (NCrF). <https://ncvet.gov.in/wp-content/uploads/2023/05/Report-on-National-Credit-Framework.pdf>

- Explains how academic credits can be accumulated, transferred, and recognised across school, higher education pathways. It supports curriculum design that encourages flexible progression, mobility, and recognition of applied learning.

National Qualifications Register (NQR). <https://nqr.gov.in/>

- A national repository of competency standards, qualification packs, and job roles across various sectors. It outlines the demands that industry expects at different levels. Useful for designing applied learning activities aligned with workplace expectations.

Samagra Shiksha - Implementation guidelines (P. 184–200). https://samagra.education.gov.in/docs/ss_implementation.pdf

- Detailed instructions on how states and schools can operationalise vocational and applied learning. It outlines roles, timelines, and processes for effective implementation.

Central Board of Secondary Education (CBSE). <https://cbseacademic.nic.in/skill-education.html>

- Contains syllabus, learning outcomes, assessment methods, and project-based tasks for CBSE's subjects. Offers structured examples of work-integrated curriculum models and ready-made models aligned with national academic expectations.

National Institute of Open Schooling (NIOS). <https://voc.nios.ac.in/>

- Offers modular, flexible courses with practical components suited for diverse learners. The learning materials are designed for self-paced and hands-on exploration, useful for schools looking to design inclusive, flexible applied learning pathways.

Core curriculum, teaching and learning resources platforms

Central Institute of Educational Technology (CIET). <https://ciet.ncert.gov.in/w&t>

- With NCERT, CIET conducts online training and creates digital resources to promote effective use of technology in teaching and learning. In line with NEP 2020, it supports digital content development and the integration of technology to improve access, multilingual learning, and classroom innovation.

National Council of Educational Research and Training (NCERT). Digital Infrastructure for Knowledge Sharing (DIKSHA). <https://diksha.gov.in/>

- A national digital platform offering training modules, lesson plans, multimedia content, and classroom resources created by NCERT and state bodies.

National Council of Educational Research and Training (NCERT). <https://ncert.nic.in/vocational-education.php?ln=en>

- Reliable source of textbooks, teacher handbooks, and instructional materials for school-level subjects, including competency-based materials aligned with national vocational standards. Materials include activities, assessments, and practical examples.

Inclusive education

Australian Education Research Organisation (AERO) (n.d.). 'Supporting the diverse needs of students'. <https://www.edresearch.edu.au/resource-collections/supporting-diverse-needs-students>

- Downloadable practice guides covering different aspects including planning, communication, emotional regulation, to support inclusive practice across all levels of school education.

British Council (2025). AI Pilot log for inclusive practice. <https://www.teachingenglish.org.uk/sites/teacheng/files/2025-08/AI%20pilot%20log%20for%20inclusive%20practice%20-%20Copia.pdf>

- A useful template for teachers testing out AI tools for inclusive practice, to record tools used, actions taken, impact and reactions, risks and reflections for improvement.

CBSE (2021). Accessibility Code for Educational Institutions, Accessible India Campaign. https://www.cbse.gov.in/cbsenew/documents/Draft_Guidelines_on_ACEI_04032022.pdf

- Draft accessibility guidelines outlining standards and actions to make all educational institutions inclusive and accessible for students with disabilities by identifying physical, information & communication barriers, and prescribing infrastructural and policy solutions.

Deakin University (2024). Communication and Teamwork skills to support neurodiversity (Open Educational Resources Collective resource). <https://oercollective.caul.edu.au/communication-teamwork-skills/chapter/introduction-to-teamwork/>

- Guide in accessible format to support neurodiverse university students with communication and teamwork. Designed for tertiary setting but suggestions and resources could be adapted to a senior secondary setting.

NSW Department of Education (2024). Universal design for learning. <https://education.nsw.gov.au/teaching-and-learning/curriculum/planning-programming-and-assessing-k-12/about-universal-design-for-learning>

- Principles for, benefits of and recommended approaches to curriculum planning to meet diverse learner needs.

State Council of Educational Research and Training (SCERT) (2019). Curricular Adaptation for Children with Special Needs - Senior Secondary Level, New Delhi. https://www.education.gov.in/sites/upload_files/mhrd/files/document-reports/Confluence.pdf

- Manual providing strategies for teachers to modify curriculum and teaching methods for students with disabilities at the senior secondary level, including adapting content, teaching strategies (like visual aids, group work, individualisation), and assessments to meet diverse needs.

Department of School Education and Literacy, Government of India (2016). Curricular Adaptations for Children with Special Needs, Confluence Vol 18, Sarva Shiksha Abhiyan. https://www.education.gov.in/sites/upload_files/mhrd/files/document-reports/Confluence.pdf

- Ministry of Education report outlining strategies and examples for adapting school curriculum and classroom practices to support inclusive education for children with special needs.

UNICEF (2016). Making Schools Accessible to Children with Disabilities, New Delhi. <https://www.unicef.org/india/reports/making-schools-accessible-children-disabilities>

- Guidebook providing practical guidance and standards for making schools physically and socially accessible for students with disabilities to enable peer learning.

Making it relevant: resources and models

Disha India Education. (n.d.). *Sahaas Vidyalaya*. <https://www.dishaindiaeducation.org/sahaas-vidyalaya.html>

- A school model that integrates community life, local knowledge, and experiential projects into everyday learning, enabling students to learn by participating in real social contexts. Resources include a detailed outline of Learning Design Principles inspired by Gandhiji, Kolb and Expeditionary Learning approaches.

Earthwatch Institute India. (n.d.). *Educational and Experiential Learning Programmes*. <https://www.earthwatchindia.org/educational-and-experiential-learning-programmes>

- Offers programs for students and teachers to work alongside scientists on real conservation issues — from monitoring air quality, forests, water bodies, to pollinators — using a “head, heart, and hands” approach.

Government of India (MY Bharat) (n.d.) ‘Find your Experiential learning opportunity today’: *Experiential Learning*. https://mybharat.gov.in/pages/experiential_learning

- Database of existing project-based, community-engaged learning designed to build students’ capacity to solve real-world problems while developing civic responsibility, leadership, and practical skills.

Karigar School of Applied Learning (Lend a Hand India). <https://lendahandindia.org/programs/karigar-school-of-applied-learning/>

- A school model combining hands-on learning, workshops, and real-world exposure within the regular curriculum, using local resources and building student engagement.

National Council of Educational Research and Training (NCERT) - Career Guide. <https://ncert.nic.in/CareerGuide.php?ln=en>

- Accessible guidance on various career paths, job roles, and subject-career connections. Designed for secondary students exploring future opportunities.

National Skills Network (NSN). <https://nationalskillsnetwork.in/>

- India’s first digital platform building awareness of applied learning and work-integrated education. It curates knowledge from practitioners and industry experts on emerging trends, practices, partnerships, and innovations in applied learning across India.

South Australian Department for Education (n.d.). Connect learning to students’ lives and aspirations’ (Teaching for Effective Learning resource). https://www.education.sa.gov.au/docs/curriculum/tfel/tfel_framework_guide_4.2_connect_learning_to_students.pdf

- Includes useful suggestions for building relationships with students, encouraging student voice and agency and developing personal and community connections to learning.

Tata Institute of Social Sciences / Connected Learning Initiative (CLIX). (2020). ‘Design thinking: A pedagogy for innovation’, *Design Thinking for Schools*. <https://clix.tiss.edu/design-thinking-for-schools/>

- A course that introduces teachers to the design-thinking process through hands-on, collaborative activities like prototyping and user-centred problem solving. Promotes pedagogy grounded in empathy, iteration, and enables creative problem-solving.

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3 PEDAGOGY FOR APPLIED LEARNING


An applied learning approach to teaching centres on building strong relationships with your students, supporting their agency and providing opportunities to experience embodied, connections between school-based learning and the worlds of work and community.

This element outlines five aspects of pedagogical practice that can help you create powerful applied learning experiences for your students. It offers tools and strategies for you to connect this learning meaningfully to the world(s) beyond school.

Resources include:

- 3.1. Building a student-centred pedagogy
- 3.2. Fostering students' agency and autonomy
- 3.3. Community and work as pedagogical sites and resources
- 3.4. Creating collaborative learning experiences for students – Tips for teachers
- 3.5.1. Applied learning lesson planning: A flexible thinking tool
- 3.5.2. Lesson plan for applied learning (Adapting the CBSE framework)
- 3.6. CPD activity for dealing with student teamwork challenges
- 3.7. Designing student reflection activity – Tips for teachers
- 3.8. Applied learning reflective tool for students

ACKNOWLEDGING THE CHALLENGE FOR TEACHERS

- Applied learning experiences can be complex and time-consuming to plan and facilitate, presenting specific challenges for teachers. Given the time constraints most teachers face, a sustainable change in practice towards applied learning approaches will usually need to start with small steps, wherever possible supported by peers, school leaders and the broader school community. Teachers cannot do it alone.
 - Suggestions in this element may not be feasible for all teachers. You will have the strongest sense of what is likely to work in your educational setting, taking into account your unique set of constraints and students.
- 

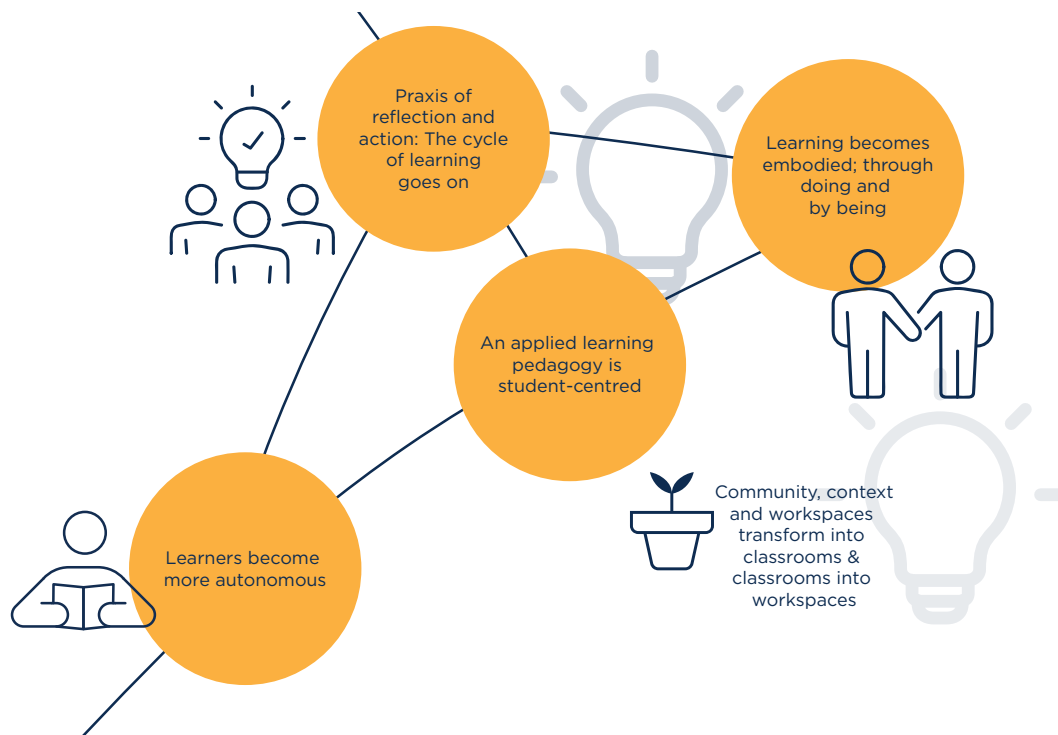


3.1. BUILDING A STUDENT-CENTRED PEDAGOGY

Strong teacher-student relationships are at the heart of applied learning. If you know something about each of your students beyond their last assessments or reports, you can guide their learning with greater insight and confidence.

Any time you can spend on building positive relationships with students is worthwhile. It supports their sense of social belonging and will likely lead to improvements in general classroom atmosphere and focus (Kincade et al 2020, Quin 2016). There will of course be some students who are reluctant to share or reflect openly, and this should never be forced.

If you teach many students and feel pressed for time, it may feel impossible to get to know all the young people who pass through your classroom, but even small actions can make a difference.



STARTING WITH STUDENTS' LIVES AND KNOWLEDGE

Teachers often start from the textbook or syllabus and then try to find real life connections with the world of work.

Instead, consider turning it around:

First steps:

Take the students' real-life contexts and the worlds of work they are familiar with as the *starting point*:

- explore their interests, future plans and what motivates them
- find out more about
 - » what they already know and do outside school
 - » the skills they have
 - » the work contexts they see and experience in the community

Practical tips to get started - finding out about your students:

- To learn about your students' interests, skills and dream careers try:
 - » Verbal pair-share exercises - students first consider a problem or question individually, then discuss it with a partner, and finally share their combined ideas with a larger group
 - » Short writing exercises – file away to refer to in meetings with students and/or parents and carers and seek more detail over time
 - » Quick surveys using a digital tool that will give you results in an easy-to-read spreadsheet for later reference
 - » Having them create an avatar that expresses their skills, interests and hopes and which they can update periodically as the year progresses
- Provide regular opportunities for students to articulate how their existing knowledge and interests connect to learning activities
- Make sure to engage with and hear from quieter students whenever possible

Large class? The above tips still apply but it will take longer to get to know all your students. You could also:

- Use parent-teacher meetings to ask and learn something of your student(s)
- Bookmark a live document (or create a page in your teacher diary) on student interests that you add to periodically over the term/year

Taking it further:

Practical tips to advance – engaging your students

- Refine learning objectives and lesson activities to reflect what you have discovered about your students.
 - » Ensure any adjustments to tasks or activities still cover the core competencies, concepts and facts you may be required to cover
- Encourage students to identify, contribute and use materials or resources that connect their interests with the topic or project
 - » Provide guidance on evaluation of quality, currency, authenticity of resources
- Invite students to suggest activities, excursions, incursions, visiting speakers or resources that they would see as valuable and relevant
 - » If there are systemic constraints that limit your ability to act on these suggestions, be clear about what is or isn't possible



SCENARIO: CONNECTING TO STUDENT KNOWLEDGE

Setting: Class 10 Geography class started a unit on water resources

Problem: The teacher wanted to move away from the textbook to make learning more locally relevant.

Solution: The teacher invited students to share their experiences of water use in their neighbourhood. For example, they spoke about borewells running dry in summer, irregular municipal supply, and tankers arriving on certain days. These everyday observations became the starting point.

The teacher framed an applied task in response:

“Let’s investigate how our neighbourhood accesses groundwater and how usage patterns affect availability.”

Students worked in groups to map local water sources. They conducted short interviews with shopkeepers, households, and the school’s maintenance staff to learn about borewell depth, tanker frequency, storage methods, and seasonal shortages.

As the investigation progressed, the teacher introduced geography concepts such as aquifers, recharge zones, water tables, and sustainable extraction. Students used these ideas to interpret what they had observed at home and out in the community.

By the end of the week, students created:

- a hand-drawn local map showing water points and usage
- a simple groundwater flow diagram
- a set of recommendations for rainwater harvesting and reduced wastage

Sharing their findings at assembly gave students a sense of purpose. The teacher observed deeper understanding, stronger analytical skills, and greater awareness of human-environment interactions, all core learning goals of her Geography subject.

To cite this Toolkit: Garner, A., Dubey, M., Leahy, M., Gillis, S., Harinandini, H., Sharma, R., & Sarangapani, P. (2026). Tools for Applied Learning in Secondary Schools. Melbourne: Australia India Institute.



3.2. FOSTERING STUDENTS' AGENCY AND AUTONOMY

Learners benefit from knowing what capabilities they will be developing and how the activities they are engaged in at school will help them get there. To build your students' agency in the learning process, consider the following suggestions.



Reminder: It may be difficult to adopt these approaches consistently. Aim to offer each learner a mentored journey for at least one unit of study in the academic year.



PRACTICAL TIPS

- Invite learners upfront to identify what they need or want to be able to do
 - » in the context of the subject or topic, and/or
 - » more broadly, in life
- Co-design a roadmap of how they will get there
 - » share stories of how others have done it, or provide pathways
 - » invite others to speak about their journey
 - » establish that struggle and confusion is normal and can be overcome through discussion and asking for help and guidance
- Share assessment rubrics early on
 - » invite questions and provide clarifications
- Support students to
 - » assess where they are in relation to the relevant competencies
 - » identify what they will need to do to build their competencies
 - » set achievable goals, using a framework like [SMART](#) (Specific, Measurable, Achievable, Relevant, Time-bound)
- Provide students with regular opportunities for self-assessment to gauge their learning progress, wherever possible against specific assessment rubric criteria.
 - » Exit slips
 - » Annotation of rubrics
 - » Reflection sessions
- Celebrate successes and milestones
- Encourage students to read and respond to targeted feedback you give them and communicate what they will do next
 - » Consider delaying release of numeric or letter grades for assessment tasks until after students respond with intention to your written or verbal feedback

Taking it further:

- Invite students' suggestions for future improvements to learning activities, project design and assessment criteria
- Explore with your school leaders any possibilities for students to contribute meaningfully to decision-making at school level (see Case study)

Q CASE STUDY: HARNESSING STUDENT AGENCY AND AUTONOMY

Mount Alexander College, a government secondary school (years 7-12) in the Melbourne inner suburb of Flemington, takes student agency seriously. They have allocated a leading teacher role in *Student leadership and empowerment* to ensure that student agency is enacted and sustained across all aspects of the school.

There are 60 student leaders across all year levels, with multi-age school captains from year 9 - 12. These are not merely ceremonial positions. Student leaders sit on school council, lead assemblies, run fundraisers and organise theatre productions. They participate in student feedback forums on matters including school buildings, uniform policy, device and language use.

Student leaders are even called upon to sit in on hiring panels for new teachers. To prepare them for this, the school provides them with tailored training in merit, equity and confidentiality. There are also systems in place to ensure diversity in the student leadership group so that the student body is properly represented.

By enabling them to apply transferable skills to real-life decision making, these opportunities are an invaluable preparation for students in life beyond school.



To cite this Toolkit: Garner, A., Dubey, M., Leahy, M., Gillis, S., Harinandini, H., Sharma, R., & Sarangapani, P. (2026). Tools for Applied Learning in Secondary Schools. Melbourne: Australia India Institute.



3.3. COMMUNITY AND WORK AS PEDAGOGICAL SITES AND RESOURCES

If you can take students out of the classroom into workplaces or community settings, you help them recognise that:

- Work and learning take place together
- The range of social interactions is diverse
- Learning takes place in relation to materials and technologies that are dynamic and continue evolving
- Cognitive and affective development go hand-in-hand

Being in touch with the world of work keeps learners and the learning process responsive to changes and new developments. It builds students' capacity to adapt and cope with change.

Curating these experiences requires careful planning and collegial support. It is best done in collaboration with other teachers and ideally with strong backing from the school administration.



CASE STUDY: COMMUNITY AS CURRICULUM AT ANAND NIKETAN, SEVAGRAM

Anand Niketan, located in Sevagram, Maharashtra (India), follows Mahatma Gandhi's Nai Talim framework. They take the community both as the key resource for learning and the space where learning is put into practice.

Students' daily routines integrate academic concepts with meaningful, productive work such as gardening, *vastrakala* (textile and craft work), cleaning, waste recycling, bicycle repair etc. These activities are not "projects" added to the timetable, but living contexts in which students encounter concepts, problems, and relationships.

Every week, teachers of different subjects meet to collaboratively design the upcoming learning activities. New teachers often take textbooks as their starting scaffolding tool to anchor their initial ideas. The group collectively explores which activity will best translate the learning objective into meaningful, embedded experience.

For instance, teachers of science, mathematics and social science come together around a common activity site: the kitchen garden of the school. Students measure plots for new saplings, calculate water requirement, observe plant growth and interview gardeners or parents who are farmers about soil type and care.

The details (measurement tools, observation sheets, timing and group roles) are decided collaboratively. The final plan is flexible, recognising that it might rain, or the gardener may not be available. The entire process is iterative. The pedagogic principle here is a judicious blend of community as the primary curriculum, and supported continuous iterations that help organise, deepen, and extend learning that emerges from and is actualised in the lives of children and their communities.

Overall, the learning is designed in a way that each activity translates into a kind of practising self-governance. Shared decision making, managing routines and resolving conflicts become embedded in student experience. This helps students rehearse their roles as responsible members of the society.

? QUESTIONS / ARE YOU WONDERING?

I am planning a field trip to give my students a workplace immersion experience, but I have had no personal, direct experience of this industry or work site. How can I ensure this group excursion is an engaging, safe and genuine learning experience?

PREPARING FOR A FIELD TRIP

If you are

- teaching a subject that relates to a specific occupation or industry, and
- have not had recent (or any) personal experience of the relevant workplace or processes.

It can be a beneficial professional development exercise to experience first-hand what goes on in that setting. This is especially worthwhile if you are planning to take students on a site visit or preparing for a workplace simulation activity at school.

How to prepare:

Connect with Industry or Community

Draw on your personal or peer network or the wider school community to find someone in the relevant profession or industry who can connect you to the right site.

Shadow a Professional

Ask if you can observe someone for a day or a few hours to gain an understanding of their work practices and environment.

Observe & Record

Take notes on what you see and hear. Pay attention to any surprising practices, processes, events, or specific terminology.

- Request permission to take photos, so students can visualise the physical spaces, infrastructure, and processes.
- Ask for samples of work-related documentation like forms or instruction manuals.
- Images and documents may be useful for any students unable to participate in the field trip.

Translate to Classroom

Link workplace processes to planned study areas and specific learning activities.

- Decide which observed processes can be adapted or represented for classroom activities (depending on your school's resources, tools or equipment).
- Prepare guide materials including relevant terminology.

Plan Student Focus

- Consider how, during a field visit, all students can gain the opportunity to observe closely and/or experience hands-on or technical aspects of the workplace (especially if in a large group).
- Outline in advance aspects of the workplace to which students should pay attention and in what order.

Safety & Etiquette

- Brief students on safety procedures and respectful behavior as visitors.
- Ensure accessibility and safety for students with disabilities.

What if I cannot take students off-campus to experience a workplace or community setting due to resourcing or other constraints?

Work is complex and demanding, and schools are not always equipped to offer such holistic experiences.

To connect students authentically with the world and activities outside school when opportunities to leave the campus are limited, you could:

- Set up project-based or collaborative learning tasks which emulate the way work is actually done in many trades and professions. (See *Additional Resource Links* section on *Project-based learning* and resource 3.4 on *Collaborative learning*)
- Based on students' interests, identify and invite members from industry or community to provide students with ideas of real problems needing solutions.
- Invite experts and members from the community to review students' projects, provide feedback, or mentor them. (See below: *Bringing in the expert*)



I have invited visiting speakers in the past who were experts in their field but had little experience talking to students. How can I make their visit worthwhile and more meaningful to my students?

BRINGING IN THE EXPERT – TIPS FOR TEACHERS TO MAKE IT WORK

Benefits of inviting in expert visitors and speakers:

When students see the richness and relevance of an expert visitor's knowledge and experience, they gain a stronger sense of the way their learning connects with the wider world.

When you and your school support the visitor to connect positively with the young people you teach, they may return. They may even consider offering other forms of support for your students' applied learning, like workplace site visits, access to resources, familiarisation or industry immersion experiences.

The challenge:

Community and industry experts are sometimes natural, or even qualified, teachers.

On the other hand, some visitors may need guidance to share their deep knowledge or experience in a way that is accessible or engaging for your students.

How can you make sure that the expert's visit or incursion is a positive and productive experience for all involved?

Before the day, help the visitor prepare:

- If you and your visitor have the opportunity to plan ahead, inform them:
 - » what topic(s) your students are currently studying. Invite the visitor to make a connection between one of these topics and their experience.
 - » about a current project your students are working on. The visitor can include insights with direct relevance to students' current work.
- If students are creating a physical artefact, ask the visitor if they might circulate to look at the students' work (even if incomplete) and offer some constructive feedback.
- Offer guidance to your visitor on connecting with students during their visit. Here are some suggestions (to adapt to suit your setting and class):
 - » Include some personal anecdotes
 - » Describe a day in your life at work
 - » Break information into bite-sized chunks allowing time for questions
 - » Be brief with facts and figures (but consider supplying details in a document as a resource for students)

- » Bring in real resources, equipment, artefacts or techniques you use in the course of your work, e.g.
 - » a historian could play a segment of an oral history interview or show digitised archival documents
 - » a lawyer could bring in a court transcript
 - » an engineer could bring in draft plans
 - » a carpenter could bring in a piece of complex joinery
- » If using professional language or jargon, explain the terms to students (especially acronyms and technical terms)
- » Leave time for questions from the students

Prepare with and for your students

- Give students some information about the visitor's background and experience, why they have been invited and how their knowledge or skills are relevant to the students' work.
- Give them time to do some extra preparatory research into the visitor, their profession, organisation or industry.
- Encourage students to prepare 2-3 questions about areas that interest them. Even if they don't all get the chance to ask their question, it will encourage them to consider what they are curious about.
- Don't decide in advance who will ask questions. Allow for some spontaneity on the day.

After the visit:

- Make time for students to discuss the visit and reflect on what they learnt. This could be done in a group discussion, a think-pair-share or as an individual written reflection.
- Ask students:
 - » What surprised you?
 - » What did you learn that was relevant to your own learning, project work, or future pathways?
 - » What are you still curious about?

You could offer different modes or formats for reflection and give students some choice in how they go about it (see Additional Resource Links on Reflective practice).

What if my students need to use specific tools or technology that are unavailable in my school?

- Investigate possible partnerships with training organisations and non-government organisations in the applied learning space.
- One example is the Skills on Wheels initiative run by Lend a Hand India.

Q CASE STUDY: SKILLS ON WHEELS: AN INNOVATION FOR WHEN RESOURCES ARE LIMITED

Skills On Wheels (SoW) is a program developed by Lend A Hand India. It provides an effective model for mobile applied learning that enhances the educational experience of students in rural and/or low income areas. The purpose of the program is to provide vocational education access to students from schools with limited resources.

Skills On Wheels is a multi-skill laboratory housed in a repurposed truck chassis. It contains essential resources for instruction, including tools for practical trades such as welding, plumbing, electrical work, and food processing. The vehicle is also equipped with necessary support technology, including audio-visual systems, Wi-fi and a generator, and is staffed by qualified vocational trainers. This mobile platform travels to different locations. Beyond training delivery, SoW also performs a crucial function in outreach and career counselling.

Students report gaining practical knowledge and utilising the bus's equipment for hands-on activities, such as welding and carving. SoW effectively addresses resource disparities by transporting specialized tools and instruction directly to communities lacking permanent training infrastructure. Its successful deployment highlights a scalable solution for practising applied learning in diverse contexts.



The Skills on Wheels initiative in action. Image: Lend a Hand India

How do I create applied learning activities for subjects like Legal Studies or Media Studies that might present ethical and safety issues for my students?

- Consider creating workbenches within the school where some parts of more complex tasks are handled.
- The World of Work workbench case study provides a useful example.

CASE STUDY: WORLD OF WORK CURRICULUM, DELHI BOARD OF SCHOOL EDUCATION, DELHI, INDIA - CREATING A WORK ENVIRONMENT WITHIN SCHOOL

Significant challenges arose when schools tried to implement the World of Work Curriculum. It proved difficult to provide safe and logistically feasible work exposure for Media Studies and Legal Studies students. Real-world placements were deemed problematic, potentially conflicting with student safety and raising ethical issues for schools. Media organisations are often fast paced and highly stressful. Legal settings could expose students to sensitive information, traumatic cases and potentially dangerous criminals.

To overcome these obstacles while retaining the core goal of work integration, the school developed dedicated, simulated professional in-school work-benches. This approach successfully guaranteed safety and maintained pedagogical and curricular focus.

Legal studies work bench: The Community Legal Aid desk

- A classroom was converted into a semi-formal office, equipped with essential legal texts and reference materials on the Bhartiya Nyaya Samhita and the Consumer Protection Act, 2019.
- Students operated as a mock Legal Aid team, managing cases based on carefully constructed scenarios.
- The cases included: drafting a First Information Report for minor theft, filing Right to Information (RTI) enquiry, mediating a local parking dispute, advising on basic consumer rights violations.
- This approach allowed students to apply statute law in a controlled, ethical environment. Students were required to work together in teams to achieve the best outcome for their case study client.

Media studies work bench: The Multi-Platform News studio

- This designated area featured basic lighting, a green screen, a tripod, and a basic editing suite to simulate a dynamic, multi-role media setting.
- Students rotated through different professional roles, such as Reporter, Editor, Producer. Their tasks included:
 - » producing a 90-second news bulletin on a school or local event under a strict deadline, and
 - » creating a Public Service Announcement video for a civic body (e.g. Nagar Nigam), thereby experiencing genuine production pressure.

These work benches had three distinct advantages:

1. Teachers controlled the situations, providing safe contexts that avoided the risks of external placements. They were able to establish safe spaces for ethical and sensitive discussions, for example on client-advocate privilege.
2. The approach ensured a pedagogical focus. Teachers could pause the simulation to provide immediate feedback and foster deeper discussions to achieve the curricular objectives.
3. Students were able to experience time pressure and the need for the types of professional conduct expected in the working world. The scenarios encouraged the integration of knowledge, skills and attitudes and provided an engaging way of linking theory and practice.



PRACTICAL TIPS FOR WORK BENCHES:

Well-designed scenarios (legal cases and media briefs) are essential. They need to be:

- aligned to the learning objectives;
- clear and coherent, unless an element of ambiguity is deliberately introduced to develop the ability to work with incomplete or contradictory information;
- in areas of interest to students; and
- designed to prevent harm

Develop clear briefs on roles and responsibilities in the work teams. This includes:

- identifying the roles that will best support the learning objectives,
- ensuring the role descriptions are not presented in gendered, racialised or ableist language.



Legal Studies workbench in action. Image: Nikita Ahuja, Specialised Resource Person, World of Work, DBSE, Delhi



3.4. CREATING COLLABORATIVE LEARNING EXPERIENCES FOR STUDENTS – TIPS FOR TEACHERS

This section offers some strategies for preparing and facilitating a collaborative learning experience for students.

? QUESTIONS / ARE YOU WONDERING?

If I move away from familiar classroom routines, expectations and processes and give students more control over their learning, won't this lead to a lack of structure, confusion or disruption?

Managing collaborative learning well involves establishing clear structures, defined roles and agreed classroom protocols with student input. These may look somewhat different from the ones you use now, but collaborative learning is not a free-for-all. Students will need your support to transition to a different way of organising themselves and their learning.

It is important to be aware of the social dynamics at play amongst students that can affect collaborative work. The better you know your students before embarking on a major project, the more likely you will be able to gauge and respond to imbalances in relationships.





CHECKLIST FOR MANAGING COLLABORATIVE LEARNING AMONG STUDENTS

Planning and timing

- ☐ Determine which aspects of a topic or unit are appropriate for collaborative or team-based work
- ☐ Work with colleagues whenever possible to co-design and/or team-teach
- ☐ Hold off embarking on complex or extended collaborative activities until you know your students well

Why collaborate?

- ☐ Explain to students why a collaborative approach is useful, beneficial or relevant in this context
- ☐ Identify the essential transferable skills that collaborative work can build

Useful knowledge and resources for students

- ☐ Provide or teach relevant domain-specific knowledge or skills before students embark on a complex project
- ☐ Have a selection of good quality real-world resources available
- ☐ Offer guidance on identifying high quality resources specific to the subject area, if research is part of the brief

Roles and responsibilities

- ☐ Establish clear team roles and responsibilities
- ☐ Create accountability mechanisms for the group and the individuals within it
- ☐ Allocate roles based on strengths (identified by you and/or by students themselves)
 - ☐ This may require some negotiation
 - ☐ No team combination will be perfect

Prepare for hiccups

- ☐ Prepare students for the likelihood of challenges and disagreements
- ☐ Explain that dealing with problems is part of the learning experience
- ☐ Build buffer time for teamwork troubleshooting into the project timeframe
- ☐ Have a back-up plan (e.g. individual work) for when team problems cannot be resolved

Monitoring and reflection

- ☐ Set up regular group and individual reflection opportunities
- ☐ Circulate regularly amongst the groups when they are actively working to check on the social dynamics and the project progress
 - ☐ Offer immediate feedback on what you are observing about the team
 - ☐ Encourage students to self-regulate as a team, but
 - ☐ Be ready to step in and provide guidance or propose team changes if the experience is becoming stressful or demoralising for students
- ☐ Build in a final post-project reflection opportunity
 - ☐ Make space for individuals to identify their own and their team's achievements, what went well and what didn't
 - ☐ Invite suggestions for improvements to the design of the activities or unit and consider for future revisions

Planning for inclusion:

Some students may find collaborative work challenging or may be hesitant to participate. This can stem from a range of factors, including group dynamics, individual communication preferences, or comfort levels in social settings. Supporting varied ways of engaging can help ensure all students feel able to contribute meaningfully.

When you know your students, you may be able to predict this and will be better placed to make adjustments to activities to ensure all students can feel included in and positive about the learning experience.



3.5.1. APPLIED LEARNING LESSON PLANNING: A FLEXIBLE THINKING TOOL

This flexible planning tool encourages you to think about different aspects of your teaching practice, including preparation for collaborative and active learning. Note that this tool has some crossover with the Curriculum design and Assessment practice elements of the Toolkit. Phases 2-4 of the Tool have a pedagogical focus.

This template serves as a thinking tool to support context-responsive lesson planning.

Select and adapt elements based on your disciplinary requirements, students' needs, institutional context, project complexity, and community and workplace resources and support systems.

What should be your approach to this template?

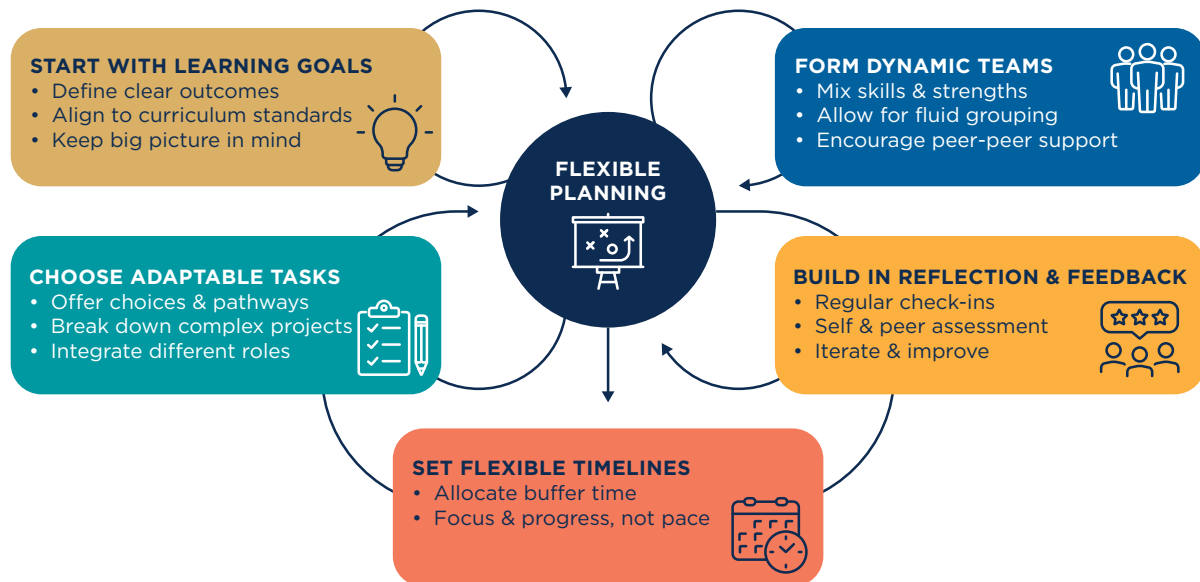
Use:

- the **Core Planning Elements** column to identify essential planning components.
- the **Contextual Considerations** points for deeper reflection, adaptation and iterations.
- Use your professional judgement. Not all considerations will be applicable to each lesson. Assess context and determine what is possible.

Phase	Core Planning Elements	Contextual Considerations (Adapt as necessary)
Phase 1: Design & Preparation	<ul style="list-style-type: none"> • Learning objectives <ul style="list-style-type: none"> » Subject-specific knowledge » Collaborative and applied skills and competence • Project overview and timeline • Assessment approach <ul style="list-style-type: none"> » Individual » Pair » Group components • Resource requirements 	<ul style="list-style-type: none"> • Have you attempted this task yourself to anticipate obstacles? • What domain-specific knowledge must be explicitly taught before students begin? • How does this project reflect real-world practices or create real-world impact? • What high-quality, real-world resources will you provide as models? • Are resources current and relevant to students' lives? • How will you scaffold for different abilities (planned scaffolds)? • What role might students play in developing ground rules for collaboration? • What physical space arrangements are needed, and what alternatives exist if ideal conditions aren't available?
Phase 2: Launch & Orientation	<ul style="list-style-type: none"> • Communicate project elements clearly (process, stages, timeframe, rationale) • Establish/co-create ground rules for safe, positive learning environment • Share learning objectives and assessment criteria • Provide worked examples and model processes 	<ul style="list-style-type: none"> • How will you communicate requirements in multiple ways (verbal, print, online)? • What questions might students have at this stage? • How will you ensure all students can access equipment/resources during demonstrations? • How does the lesson design ensure an embodied learning experience for students?

Phase	Core Planning Elements	Contextual Considerations (Adapt as necessary)
Phase 3: Implementation & Facilitation	<ul style="list-style-type: none"> • Structured group work with defined roles based on student strengths • Ongoing formative assessment to identify areas needing re-teaching • Both individual and collaborative demonstration opportunities • Periodic project plan reviews 	<ul style="list-style-type: none"> • When is whole-group instruction needed? E.g. to provide foundational information or address shared misunderstandings • How are you rotating among groups, asking probing questions, offering insights? • How will you adapt to any unexpected issues? • When should you let groups solve their own problems vs. stepping in? • Do students need guidance on identifying good quality sources? • If using AI tools, how are you supporting critical and ethical use?
Phase 4: Reflection & Synthesis	<ul style="list-style-type: none"> • Structured reflection activities (individual and group) • Summary and concluding activities • Connection to learning objectives • Student feedback on the learning experience 	<ul style="list-style-type: none"> • When should reflection occur: before, during, and/or after the project? • What disciplinary knowledge and professional judgment guide your facilitation? • How can students demonstrate both individual mastery and collaborative competence? • How are you ensuring that learners can develop autonomy? • What constructive feedback did students offer for improving this activity?
Phase 5: Assessment & Iteration	<ul style="list-style-type: none"> • Evidence of learning objectives met (individual + collaborative) • Documentation of student work/outcomes • Your professional notes on what worked and what didn't 	<ul style="list-style-type: none"> • What patterns emerged among strugglers and achievers? • What would you adjust for next time? • What institutional or peer support would strengthen your confidence in facilitating this type of learning? • What small modifications could make this more manageable within time constraints?

FLEXIBLE PLANNING TOOL FOR COLLABORATIVE LEARNING



PRACTICAL TIPS FOR FLEXIBLE IMPLEMENTATION

Starting Small	You don't need to implement all considerations at once. Consider making one existing lesson collaborative, gathering student feedback, and iterating from there.
Space Adaptations (Fixed Furniture)	If working with fixed furniture, explore alternative solutions like requesting occasional room swaps, moving to school grounds for specific activities, using digital collaboration tools, or inviting student ideas for innovative arrangements.
Time Management	Overall, keep your calendar handy for planning ahead; be mindful of institution-level holidays, scheduled co-curricular activities and events of cultural significance. Coordinate with the time-tabler in-charge, year level or subject coordinators if you need to block periods, schedule visits or invite experts.
Resource Quality	Approach resources from affordability, accessibility and reliability standpoint. "What is readily available in my context?" is a good starting point.
Reflection	Consider the biggest challenges in initiating or managing collaborative learning activities. What kinds of institutional or peer or community support would make it possible for you to engage with more confidence in applied learning experiences? What small first steps could you take to begin preparing your students for applied learning experiences?



Reminder: Adapt thoughtfully based on what serves your students' learning best!



3.5.2. LESSON PLAN FOR APPLIED LEARNING (ADAPTING THE CBSE FRAMEWORK)

Purpose of this resource: Help teachers with lesson planning for *applied learning specifically*, in the framework of CBSE Senior Secondary Curriculum general guidelines.

Left-hand column: The CBSE's suggested elements of lesson planning including desired pedagogical approach. From the *Senior Secondary Curriculum 2025-26* guidelines, section 2, available at cbseacademic.nic.in/web_material/CurriculumMain26/SrSec/Curriculum_SrSec_2025-26.pdf.

Centre column: Suggestions for planning focusing on *applied learning* principles and practices.

Applied learning can look very different based on subject and context, so consider this a flexible template. Adapt as you see fit.

Subject/Module/Theme: Date: Lesson objective/Goal:		
CBSE recommended elements	Suggestions specific to applied learning (Toolkit)	Your planning notes
Specific learning outcomes <i>i.e. 'what a learner is expected to know, understand and/or be able to demonstrate after completion of a process of learning'</i> These can be broken into <i>learning goals</i> and <i>success criteria</i> – see Toolkit Assessment section	Communicate desired outcomes in a range of ways / formats. Make clear the connection and applicability to the world beyond the classroom. Explain how students can demonstrate their learning progress. e.g. <i>Students will be able to demonstrate:</i> <ul style="list-style-type: none"> • <i>understanding of terminology used in [profession / trade / industry] through</i> • <i>effective use of these terms to communicate [message] to [relevant party] in [situation/ context]</i> Invite students to identify what they already know / can do. Share relevant assessment rubric criteria.	
Pedagogical strategies <i>Focus on 'experiential and active learning', encouraging 'reflections, connecting with the world around them, creating and constructing knowledge.'</i>	Identify which aspects of the lesson <ul style="list-style-type: none"> • require explicit teaching to ensure students have essential knowledge • focus on skills required for next steps and application • are suited to being student-led • can involve moving around or outside of the classroom • lend themselves to team / collaborative work Build in reflection activities to encourage students' self- and peer monitoring of progress.	

CBSE recommended elements	Suggestions specific to applied learning (Toolkit)	Your planning notes
Group activities / experiments / hands-on-learning	<p>Identify in advance:</p> <ul style="list-style-type: none"> • physical / spatial requirements • materials and equipment for hands-on, experimental or group learning • actions requiring modelling / demonstration by you or a technician or industry-qualified trainer <p>Familiarize yourself with using the tools / materials for practical sessions.</p> <p>Identify colleagues or others with more experience you can call on if required.</p> <p>Determine relevant health and safety precautions and communicate these clearly during lesson.</p> <p>Estimate timing of activity stages, with flexibility. Consider re-organising furniture, set-up and pack-down of equipment or resources.</p> <p>Set up group activities with</p> <ul style="list-style-type: none"> • allocation (and/or negotiation) of team roles based on student strengths • clearly stated expectations for effort and engagement with peers • time allowed for trouble-shooting group dynamics 	
Interdisciplinary linkages and infusion of life-skills, values, gender sensitivity etc	<ul style="list-style-type: none"> • Note connections with other subjects and themes familiar to students • Invite discussion of values and life skills relevant to the lesson • Assess language use in lesson resources and adjust to ensure inclusivity, and/or • Encourage students to analyse language use in resources and suggest improvements for inclusivity 	
Resources (including ICT)	<ul style="list-style-type: none"> • Consider 'resources' in broad sense – documents, websites, databases, instruction manuals, news items, physical artefacts, audiovisual material, local expertise shared in person or by video conference. • Include authentic / up-to-date / local or industry-relevant resources to complement (or replace) textbook. Invite student suggestions based on their connections / experience. • Identify apps / digital tools used in workplaces / community settings relevant to lesson and incorporate into activities if feasible. • Guide students in assessing quality and currency of resources: checking for bias, inaccuracy, commercial interests, misinformation and AI slop. 	

CBSE recommended elements	Suggestions specific to applied learning (Toolkit)	Your planning notes
Assessment items for measuring the attainment of the learning outcome <i>[See Toolkit Element 4 on Assessment using developmental rubrics]</i>	<ul style="list-style-type: none"> Share assessment rubric with students so they can see how lesson relates to knowledge and skills to be assessed. Explain which specific elements and criteria of rubric(s) are relevant to this lesson's activities. Highlight relevant transferable skills. 	
Feedback and remedial teaching plan	<ul style="list-style-type: none"> Plan opportunities to give informal and formative feedback during the lesson Focus feedback on specific capabilities identified in rubric. Communicate next steps to students. Invite student feedback on lesson for future reference. Note areas of student difficulty and further supports needed in planning document. 	
Inclusive practices <i>'ensuring full participation of all students with equal opportunity in all areas without any discrimination'</i>	<ul style="list-style-type: none"> Communicate essential information in a range of formats – verbal, visual, textual, tactile. Identify students who may need extra support. Prepare for alternative ways students can demonstrate learning progress. Observe social dynamics and listen to students' concerns when forming teams. Provide all students with opportunity to use tools / resources. 	
Reflection Make space in your planning document for your notes on completed lessons, including student feedback. e.g. What worked? What didn't work? What will you change next time? What extra scaffolding (supports) or extension (higher order questioning) are needed to ensure every student can participate meaningfully and progress?		



3.6. CPD ACTIVITY FOR MANAGING STUDENT TEAMWORK CHALLENGES

An adaptable, collaborative CPD activity for teachers designed to support thinking through the dimensions, possibilities and challenges of collaboration for students. The activity involves having teachers come together to respond to a scenario and experience a collaborative structure as a way into reflecting on and preparing for potential pitfalls.

Total activity time: approx 1 hour (depending on number of participants)

NOTES ON USE FOR SCHOOL LEADERS:

- This could be offered as a stand-alone session in a school-based or discipline-specific CPD workshop series.
- The scenario can be adapted to suit a specific school setting or subject area.
- The questions can be reduced in number or rewritten to address specific challenges facing the teaching faculty.
- The reflection activity could be developed to encourage peers to share and discuss insights.
- The discussions can help school leaders determine which areas deserve more attention when planning future CPD activities.
- Organise a facilitator.
- Design it to count towards teachers' CPD hours and issue certificate.

ACTIVITY PURPOSE:

To develop strategies for responding to student group work challenges through a structured collaborative exercise

Note: the idea is to run the activity in a way that

- echoes the structure and role allocation useful for student group work
- includes a mixture of constraints and opportunities for negotiation and agency
- invites reflection on process

ROLE OF FACILITATOR:

- Invite each table spokesperson to offer their group's key points in turn 2 mins per group
- Take notes on key points on board / shared doc.

Note on timing: it will depend on number of table groups - aim for max 20 mins total reporting back

- Once all groups have reported, summarise key points made and note any areas of disagreement that may require further examination in another session
- Explain final short reflection task.

SET UP:

Teachers sit in table groups or circles of 4 - 5

Facilitator writes up 5 (numbered) group roles on the board / in a shared doc

1. scribe to keep notes (by hand or in shared doc)
2. timekeeper
3. conversation monitor (ensures that everyone gets a chance to contribute to the discussion)
4. spokesperson who will report back to the larger group
5. accuracy checker (ensure the spokesperson correctly represents the discussion, with the right to add a comment during reporting back)

Explain the Activity process A-E (see below), or share written instructions so each group can manage themselves accordingly

MATERIALS ON EACH TABLE:

- 1 printout of scenario + 8 questions (A3 paper or larger)
- blank paper and pens or (if online / using devices) a shared doc
- 5 role cards face down (could be slips of paper each with a number - corresponding with group roles as listed above)

ACTIVITY:

- Each person picks up a numbered card to find out their role in the group.
- Timer: allow 2 mins for negotiated role swaps based on strengths and preferences. If not finalised in 2 mins, then random re-allocation by the timekeeper (or youngest at the table!). 3 mins
- Conversation monitor (role 3) reads the scenario out to the group. 1 min
- Group members work through the 8 questions together. Either discuss all 8 questions briefly or spend more time on selected questions that seem most important to the group. Scribe records key points made. Conversation monitor ensures everyone gets a chance to contribute. 20 mins
- Decide as a group on three key points you want to make based on your discussion overall that you agree would help Mrs Kikon deal with the situation. 6 mins

TOTAL TIME: 30 MINS

**SCENARIO FOR CPD ACTIVITY**

Mrs Kikon sets up a three-week project for her Class XI subject students, based on a real-life problem, with roles allocated based on students' interests and strengths.

A week in, there are difficulties with some of the group members.

One high-achieving student Z complains that she is doing all the writing work. Another student P who has dyslexia but is a confident speaker complains that Z doesn't allow him to contribute. A third student has been absent for most of the first week and has missed crucial information.

QUESTIONS FOR TEACHER GROUPS:

How can Mrs Kikon support students to work through these various challenges and ensure they get the group project back on track?

Consider:

- What protocols could Mrs Kikon establish before the project begins that would help students anticipate and/or deal with a situation like this?
- What could she encourage the students to do, to deal with the problem themselves?
- How willing should Mrs Kikon be to let her students experience some frustration and discomfort in the process?
- When do you think she should step in (if at all)?
- Should Mrs Kikon work with the group or with individual students (or both) to help them come up with a workable solution?
- What should Mrs Kikon do if several groups are experiencing similar problems at the same time?
- How should Mrs Kikon respond if a parent complains about group work on behalf of their child?
- What kind of support would be helpful to Mrs Kikon - or to you - from colleagues and/or school leadership
 - » When setting up project-based / collaborative learning
 - » When responding to difficulties that arise

INDIVIDUAL TEACHER REFLECTION (POST-ACTIVITY):

- Take 3 - 5 minutes to reflect on how you found the process of this group work activity.
- If you were to identify one main emotion you experienced during the activity what would it be?
- Was there enough time for a meaningful group discussion to take place?
- What, if anything, would you change to improve the design of the activity if you were to do something similar for your own students?





3.7. DESIGNING ACTIVITIES FOR PURPOSEFUL STUDENT REFLECTION

The basic purpose of reflection is to stop and take stock of a situation and make plans for improvement. There are various forms of reflective practice, including (but not limited to):

- informal individual (freeform, spontaneous, or in response to an open question; thought, written or verbalised)
- structured individual (e.g. written or verbal task or survey with guiding questions)
- teacher-guided (1:1, small group or whole-class)
- peer-led
- informal group / collective
- facilitated group / collective

These serve a variety of purposes and involve different levels of planning. They may also be enacted in a range of different modes and formats and be quick or more extended activities.



SCENARIO: DESIGNING ACTIVITIES FOR PURPOSEFUL STUDENT REFLECTION

Setting:

Higher secondary school subject

Problem:

A teacher implemented a structured weekly reflection activity on group project work. Initially, many students gave minimal, generic responses, like “the group work was fine,” or “I learned a lot”, or “I enjoyed participating in the activity but one aspect bothered me.”

The design of the activity prevented students from expressing their honest opinions. This could have been due to fear of being judged by peers or of how it might affect the group’s performance.

Solution:

The teacher’s solution was to redesign the activity to model specific and non-judgmental prompts and have students try out constructive feedback language. This allowed students to begin speaking more openly about challenges and seek genuine solutions.



PRACTICAL TIPS FOR TEACHERS:

1. Ensure students understand how and why reflection can be useful to them.
2. Link reflective activities to specific aspects of or stages in the learning process (for instance, you can develop questions based on the developmental assessment rubric for a task or unit).
3. Offer examples of reflection that are specific and not superficial.
4. Don't abandon reflection activities if the first attempt doesn't work.

When things don't go to plan: an opportunity to reflect

When facilitating applied learning, a challenging moment – from a design error in a project or a team breakdown – provides an opportunity for reflection. If you are encouraging students to reflect in a group, make sure the boundaries are clear and that you have prepared them with models of open-ended prompts and constructive responses.

If you are inviting students to reflect on an incident, give them some guiding questions. For example, you might ask them to answer the following questions:

- What happened? (Describe the context and the incident).
- *How* did you feel when it happened?
- *What* do you think went wrong / went well?
- *Why* do you think it went wrong / went well?
- Can you summarise what you have learned from this experience?
- What will you do if it happens again?
- What other steps can you take to be better prepared next time?

This is a moment when students can stop, observe, assess what happened and try to figure out why. They can then develop a plan of action based on what they learn from that experience. This can help students move on from a negative experience to a sense of possibility and agency.



3.8. APPLIED LEARNING REFLECTIVE TOOLS FOR STUDENTS

These tools are envisioned and designed to help students to pay attention to their learning. Students are encouraged to:

- observe what are they doing
- how they are learning
- who are they learning with
- how their actions make a difference in real contexts.

All the items in these tools are adaptable. Students should be encouraged to modify and personalise the tools according to their learning context, personal needs, and experiences. It is even more meaningful when teachers and students co-design reflective tools. Teachers can determine if the responses are to be shared with them or parents.

These are mapped to the core pedagogic principles and elements of applied learning as discussed in this chapter.

Learner's agency and autonomy: Am I becoming an autonomous learner?	Detailed Notes
What choices and decisions did I make during this activity?	
How did I make choices and decisions in this activity?	
What actions did I take on my own?	
Did I ask questions? What kind of questions were they? (e.g. closed - yes/no - or open-ended?)	
Did I experiment with ideas or different ways of doing things? (Give example)	
What helped me take initiative?	
What are the things which put me in doubt?	

Community and Work as Learning Resource	Detailed Notes
What real-world situation, community issue, or workplace practice did this learning relate to?	
How did I connect with others (peers/community/experts) to learn?	
Did I use real tools, stories, materials, or methods from the world outside school? Which ones?	
How did my work have an effect on others (even small)?	

Embodied Learning	Detailed Notes
What did I do with my hands, body, tools, or real materials?	
What was challenging about actually doing the task (not just thinking about it)?	
What did I learn through experience? Was there something I learned this way that I could not learn through reading or listening?	
Did I feel confident while doing these things? Why or why not?	

Reflection	Detailed Notes
What went well in today's session/class/activity?	
What difficulties did I face? Did others also face the same difficulties?	
What changes will/can I make next time?	
How will those changes improve what I do next? (Be specific.)	

BACKGROUND NOTES

AN APPLIED LEARNING PEDAGOGY

Indian secondary education years are high stakes, with students facing public examinations and outcomes that shape opportunities beyond school. Teachers are often expected to focus on pedagogical practices that emphasise performance in tests and exams. This commonly involves a strong focus on textbooks and practice for written assessments (Kumar, 2017).

Meanwhile, the National Education Policy (NEP) 2020 and the National Curriculum Framework for School Education (NCFSE) 2023 emphasise the importance of application in learning and the need for active pedagogies that establish connections with learners' context. It can be challenging to navigate between these two sets of expectations, especially when you are under intense time and workload pressures (Kulal et al, 2024).

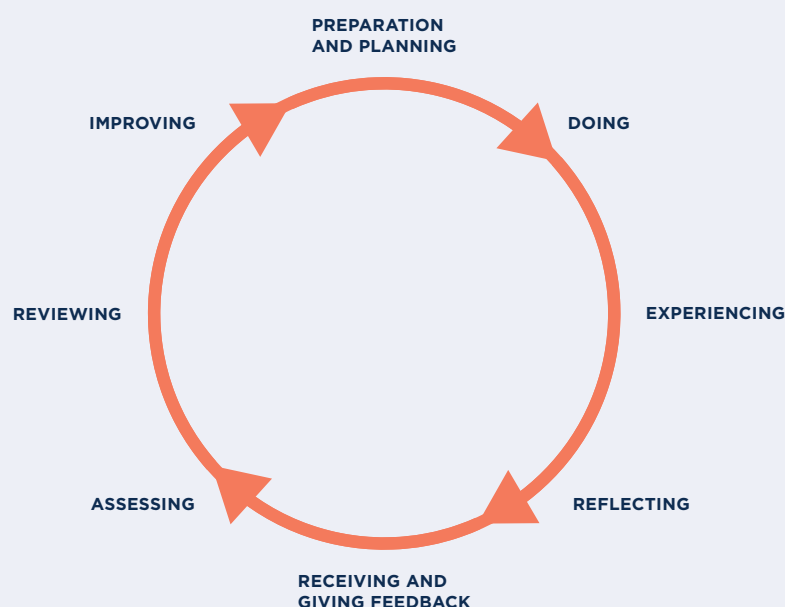
An applied learning pedagogy incorporates evidence-based teaching practices currently recommended across all school settings. These include:

- communicating clear learning objectives
- building on students' existing knowledge
- 'chunking' new knowledge to manage cognitive load - breaking large amounts of complex information into smaller, meaningful, manageable 'chunks' or groups
- scaffolding - providing temporary support to help students learn a new skill, with the support gradually removed as the student becomes more proficient
- modelling practice - demonstrating skills, concepts, or thought processes for students to observe, understand, and then replicate - and
- offering regular, targeted and useful feedback to students

There are many existing resources and guides for the above general dimensions of effective pedagogy (see, for example, CBSE Teachers' resources and AERO Practice Guides).

This Toolkit element focuses on specific aspects of teaching that will help you build stronger links between the classroom and the world beyond. Applied learning involves a conscious, intentional pedagogical cycle. Preparation and planning, doing, experiencing, reflecting, receiving and giving feedback, assessing, reviewing and improving are all part of a continuous process.

The primary concern in applied learning pedagogy is to develop learners' competencies. The task or job—the 'doing'—is an important, but secondary concern. The main focus for you as a teacher is on the *transformation of the students themselves*, through the learning experience.



A STUDENT-CENTRED PEDAGOGY

An applied learning pedagogy requires you to be sensitive and responsive to your learners, their needs and contexts. Teacher-student relationships are crucial in any educational context, but are especially important in applied learning (Quin 2017, Kincade et al 2020).

Applied learning is centred on equipping students for life in the world outside. Students are complex human beings with lives and concerns beyond the classroom. Applied learning creates opportunities for students to consider and test out the usefulness of what they are studying, to see the connections with other parts of their life and their imagined futures. When you open up a space for exploring and strengthening the relevance of school studies, you can build stronger relationships with your students.

If you know something about each of your students beyond their last assessments or reports, you can guide their learning with greater insight and confidence. Assessment results or reports are useful when considering past subject-specific achievements, but usually provide minimal information about the multifaceted personalities of students.

See resource 3.1.

FOSTERING STUDENTS' AGENCY AND AUTONOMY

Conventionally, students are socialised to listen and to do as instructed. They may focus on the outcome of an assessment and have limited understanding of the significance of tasks, or of their own capacity. Learning happens to them.

When we encourage learners to take more responsibility for what they do and what they learn, they begin to perceive themselves as capable of achieving things in the world. Increased self-efficacy and a strong sense of identity prepares young people for the complexities of the world of work and life beyond school (Lee et al., 2026).

As their teacher, you can actively support your students on this journey towards autonomy. To build your students' agency in the learning process, see resource 3.2.

COMMUNITY AND WORK AS PEDAGOGICAL SITES AND RESOURCES

An applied learning pedagogy extends sites of learning to places outside the school, transporting learners and the learning process into the community and into workplaces.

It also brings the community, workplaces and people *into* the school, as teachers and as objects or subjects of learning.

Why emphasise work-related applications of learning?

- Work makes relevance of learning more visible to students from the start. If they have no idea why something needs to be learnt, they can lose interest and motivation to persist.
- Instead of being the primary focus of the class, textbooks become supplements for learners to draw on.
- The focus on workplace and out-of-school contexts highlights the competencies and dispositions that students need to develop, and their ability to use the concepts they are learning about.

Students are mostly learning in peer groups and relating primarily to the teacher. If you can take students out of the classroom into workplaces or community settings, you help them recognise that:

- Work and learning take place together, akin to apprenticeship situations where the novice learner is engaged alongside advanced learners and experts/masters and the learning process is multimodal.
- Diverse social interactions take place. For example, interacting with clients or customers, suppliers, superiors or with peers all evoke different perspectives on the quality of one's growing competence and learning.
- Learning takes place in relation to the materials and technologies that need to be handled and the tools which need to be used.
 - » These are dynamic and continue evolving. Being in touch with the world of work keeps learners and the learning process responsive to changes and new developments. It builds students' capacity to adapt and cope with change.
- Cognitive and affective development go hand-in-hand.

See resource 3.3.

STUDENT REFLECTION

Reflection is increasingly seen as an essential professional skill and your students will benefit from practising this skill to prepare for their future working life.

Your own profession asks you to be a reflective practitioner. By reflecting regularly on your own experiences in (and beyond) the classroom, stopping to consider what worked, what didn't, what surprised you, what you could change next time, you make space for improvement in your practice (Machost and Stains 2023; Ash et al., 2009).

You can model reflective practice in the classroom, articulating your thinking processes out loud. This can be a deliberate, planned strategy or occur more spontaneously when it becomes a habit.

By assessing unusual or challenging situations or questions you and your students face, and talking through how you might move through them constructively, your students hear you *doing* reflection. If you have already demonstrated what it looks like, and have named it as reflection, it will seem more natural that you should then ask them to do the same in the course of their learning (Brookfield et al., 2024).

REFLECTIVE PRACTICE

- helps students analyse and refine their process for building new skills and knowledge;
- gives students practice in communicating their experiences, thoughts and feelings to others;
- can improve their wellbeing and relationships with others;
- prepares them for workplaces and communities where the capacity for self-reflection and interpersonal communication are highly valued.

See 3.7 and 3.8.

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ADDITIONAL RESOURCE LINKS

Applied learning pedagogical approaches (active, experiential, problem and project-based learning)

Central Board of Secondary Education (CBSE). (2020). Experiential learning: A national framework for active pedagogy. *Experiential Learning: A Handbook for School Leaders and Teachers*. <https://cbseacademic.nic.in/web-material/Manuals/ExperientialLearning.pdf>

- A handbook that explains the principles of experiential learning and offers practical guidelines, classroom strategies, and assessment approaches for implementing project-based and inquiry-driven practices.

Education Week. Teachers Try This. <https://youtube.com/playlist?list=PLb-gDFTi17UWLNLvNFqKkRO6O9bc6LCif&si=-l-zqyf--pU1wbDB>

- Short videos recorded by teachers with suggestions for engaging students, supporting their wellbeing, sense of belonging and creativity.

HQPBL (n.d.). Framework for High Quality PBL. <https://hqpbl.org/>

- Proposes six criteria for high quality project-based learning: Intellectual challenge and accomplishment; authenticity; public product; collaboration; project management; reflection.

PBL Works (n.d.). Gold Standard PBL: Project Based Teaching Practices. <https://www.pblworks.org/what-is-pbl/gold-standard-teaching-practices>

- Snapshot of seven essential elements of project-based teaching.

PBL Works (2019). Project Based Teaching Rubric. https://my.pblworks.org/resource/document/project_based_teaching_rubric

- Outlines 3 levels of PBL Teacher proficiency: Beginning, Developing and Gold Standard. Designed to help teachers self-evaluate their current capabilities and consider steps to improve their facilitation of project-based learning.

The Project (podcast) (2020). PBL Bloopers: stories from the PBL trenches. Episode 3 (Aug 10, 2020). <https://www.pblworks.org/podcast-stories-pbl-teachers-field>

- Two teachers discuss their first failed experiments with project based learning and reflect on what they could have done differently.

University of Queensland Institute for Teaching and Learning Innovation (n.d.). Teaching practices guide. <https://itali.uq.edu.au/teaching-guidance/teaching-practices>

- Provides an overview of different forms of active, experiential, problem- and inquiry-based collaborative learning. University focus but adaptable to senior secondary settings.

University of Minnesota Center for Educational Innovation (n.d.). Addressing active learning challenges. <https://cei.umn.edu/teaching-resources/active-learning/addressing-active-learning-challenges>

- Teaching resources to support active learning. Designed for higher education but adaptable to senior secondary settings. Provides suggestions for common problems that arise.

Building relationships

AERO (2023). Practice guide: Encouraging a sense of belonging and connectedness (Guide for teachers and school leaders). <https://www.edresearch.edu.au/sites/default/files/2023-03/aero-sense-of-belonging-and-connectedness-secondary.pdf>

- Practical advice for teachers in the classroom and leaders contemplating whole-school approaches. Includes reflection equations, scenarios and next steps.

Centre for Education, Statistics and Evaluation, NSW Department of Education (n.d.). Belonging: A foundation for equitable school ecosystems. <https://education.nsw.gov.au/content/dam/main-education/about-us/educational-data/cese/2020-supporting-students-sense-of-belonging-reflection-guide.pdf>

- A practical reflection tool that helps teachers evaluate how school and classroom practices foster students' sense of belonging through relationships, classroom culture, and inclusive participation.

OneHE / Equity unbound, Community building activities. <https://onehe.org/equity-unbound/>

- Open educational resources for online community building built on principles of equity and care. Many of these could be adapted to classroom learning.

Victorian Department of Education (n.d.). ARC Resource. High Impact Wellbeing Strategies. https://www.education.vic.gov.au/Documents/school/teachers/teachingresources/practice/High_Impact_Wellbeing_Strategies.pdf

- Outlines seven key strategies for teachers to support student wellbeing

Fostering Learners' Agency and Autonomy

Disha India Education. (n.d.). Swaraj in Education: Learning for autonomy. <https://www.dishaindiaeducation.org/swaraj.html>

- A resource that reimagines schooling for self-reliance, community collaboration, and democratic participation, inspired by Gandhian and Indian philosophical ideas of education.

Victorian Department of Education (2025). Victorian Teaching and Learning Model Guide 2.0. Enable student self-regulation and self-efficacy. <https://arc.educationapps.vic.gov.au/61380.rsf>

- A guide for teachers to support students to develop as self-regulated learners.

Reflective practice: Students

Honey W. Nashman Center for Civic Engagement and Public Service. Resources to facilitate student reflection. <https://serve.gwu.edu/resources-facilitating-student-reflection>

- Outlines principles for student reflection: Continuous (through the learning process), Connected (to learning), Challenging (employing complex and critical thinking) and Contextualised. Includes some reflection prompts that can be built into assignments.

Macquarie University Reflection for Learning Circle (2018). Reflection resources. https://teche.mq.edu.au/wp-content/uploads/2018/03/A415_003-Reflection-Resources.pdf

- Set of useful templates for reflective activities that can be adapted to different learning contexts, organised into Early, Intermediate and Deep Reflection. Designed for higher education but suitable for senior secondary students.

National Council of Teachers of English (2011). Read Write Think Classroom Resources: Exit slips. <https://www.readwritethink.org/sites/default/files/Exit%20Slips.pdf>

- Downloadable exit slips for quick post-lesson reflection activities.

PBL Works (n.d.). Post project reflection and feedback from students. <https://my.pblworks.org/resource/post-project-reflection-and-feedback>

- Advice on seeking student feedback on project design to inform future improvements. Also links to a Self-Reflection Project Work template. (Sign up for a free account to access resources)

Reflective practice: Teachers

Australian Institute for Teaching and School Leadership (AITSL). How To Guides: Reflection. <https://www.aitsl.edu.au/teach/improve-practice/how-to-guides/reflection>

- Brief overview of benefits of teacher reflection, including Brookfields' four reflective lenses (Autobiographical - Student - Colleague - Theoretical).

NSW Department of Education. (2025). Strong Start Great Teachers resource: Reflective practice. <https://education.nsw.gov.au/teaching-and-learning/professional-learning/teacher-quality-and-accreditation/strong-start-great-teachers/developing-focus/reflective-practice>

- Offers brief outline of relevant research and unpacks four lenses for teachers' reflective practice. Links to a useful list of reflective questions.

UCL (London) Arena Centre (2024). Teaching Toolkit resource. Constructive conversations to improve teaching. <https://www.ucl.ac.uk/teaching-learning/publications/2024/sep/constructive-conversations-improve-teaching>

- Useful guidance on engaging in dialogue with peers to improve teaching practice. Created for university teachers but adaptable to secondary settings.

Continuous Professional Development (CPD)

Australian Institute for Teaching and School Leadership (c. 2018). Improving Teacher Professional Learning: A continuous learning cycle. <https://www.aitsl.edu.au/teach/improve-practice/improving-teacher-professional-learning>

- Advice for teachers and leaders on planning high quality, collaborative professional development. Includes templates, implementation guides, video cases studies and quick guides on different aspects of CPD.

National Council of Educational Research and Training (NCERT). Digital Infrastructure for Knowledge Sharing (DIKSHA). <https://diksha.gov.in/>

- A national digital platform (and app) for students and teachers, offering a wealth of teaching and learning resources, modules, lesson plans, multimedia content and CPD materials.

National Council of Educational Research and Training (NCERT) (2022). Guidelines for 50 Hours of Continuous Professional Development for Teachers, Head Teachers and Teacher Educators. <https://ncert.nic.in/pdf/Guidelines50HoursCpd.pdf>

- Guidelines for teachers, head teachers and teacher educators on the design of professional development and modes of delivery.

Skills-based and vocational pedagogies

National Council for Teacher Education (NCTE). Integrated Teacher Education Program (ITEP) (see p. 126-134). https://ncte.gov.in/website/PDF/Final_Secondary.pdf

- Detailed course outline for preparing teachers in both general and vocational pedagogy, emphasising project-based and experiential learning and work exposure.

Pandit Sunderlal Sharma Central Institute of Vocational Education (PSSCIVE). Guidelines. <https://www.psscive.ac.in/publications/guidelines>

- PSSCIVE is a vocational education R&D organization established by the Ministry of Education, involved in supporting vocational pedagogy, curriculum development, training and applied learning implementation strategies.




4 ASSESSMENT OF APPLIED LEARNING

Teachers, this element provides guidance on how to assess students within an applied learning context.

School Leaders, you will benefit from the hints and tips on how you can support your teachers to effectively implement authentic assessments for applied learning.

Resources include:

- 4.1. Essential steps for designing an authentic assessment task
 - 4.2. Checklists for creating and evaluating developmental rubrics
 - 4.3. Example of an outcome-based developmental learning rubric
 - 4.4.1. A guide for conducting formative assessment
 - 4.4.2. Example of formative assessment in practice
 - 4.5. Strategies to gain support of school leaders
- 

4.1. ESSENTIAL STEPS FOR DESIGNING AN AUTHENTIC ASSESSMENT TASK

Authentic assessments provide opportunities for students to demonstrate their learning by applying their knowledge and skills to meaningful, real-life tasks that align to the intended learning outcomes of the curriculum. They require students to solve problems, create products, and/or perform activities that resemble situations that they may encounter outside the classroom.

When designed and implemented with care, assessment tasks can connect students' learning to real life, promote deeper understanding, develop higher order thinking skills and provide meaningful, engaging learning experiences.

STEPS TO DESIGN AN AUTHENTIC ASSESSMENT TASK

There are 5 sequential steps recommended to design realistic assessment tasks that measure beyond knowledge. Refer to the Assessment resources numbers for examples of authentic assessment tasks.

Step 1: Clarify the purpose of the authentic assessment

Ask yourself:

- What is the purpose of the assessment (e.g., summative or formative)?
- What specific knowledge, skills and attributes are to be assessed?
- What are the interests and aspirations of my students?
- Do any of my students have additional needs (e.g., disabilities, language challenges, learning difficulties) that may impact on how they can demonstrate their learning?

Tip:

- *Focus on the intended learning outcomes as well as the general capabilities, values and dispositions specified within the curriculum, not just knowledge.*

Step 2: Identify real-world context for applying the intended outcomes

Ask yourself:

- In what kind of situations would school leavers use the knowledge, skills and attributes in the workplace, home or wider community?
- What type of role would they have (e.g., journalist, coach, data analyst, sporting team captain, artist)?
- Who would they interact with (e.g., clients, team members, supervisors, friends, family)?
- What would they be expected to do or create in that context? For example,
 - » Present a persuasive pitch to a community group
 - » Prepare a business plan for an employer
 - » Create a design drawing for a client
 - » Mediate a dispute amongst younger siblings
- What equipment, tools, data or reference materials would be available for use in real life settings?
 - » Can my students access these resources? If not, could they be simulated for use in a school setting (e.g. industry equipment, company policy documents). How difficult would it be to try to simulate these conditions in a classroom environment?

Tips:

- *Think about actual workplace settings, industry scenarios, home environments, or community projects that reflect these conditions.*
- *Try to link your students' interests to real world situations in which they could apply their skills and knowledge.*
- *Focus on application, not just recall.*
- *If real-world resources are not available at the school level, and/or cannot be readily simulated, then draw on the support of your principal to seek resources outside of the school (see step 5)*

Step 3: Document the administration requirements for the task to replicate a real-world context.*Ask yourself:*

- What method of assessment best mirrors what students would be expected to do or create in the real-world context identified in Step 2? (e.g., role play, portfolio, written report, interview, oral presentation, project).
- For this chosen method, what instructions should be provided to students to get students to say, do, write and/or create something (i.e., produce evidence of their learning)?
- How will your students demonstrate both their knowledge (i.e., 'know what') and application ('know how' and 'know why') when responding to these instructions?
- What are the conditions for administering this task to students (e.g., time restrictions, access to resources, level of support permitted by the teacher, individual versus group response, word limit).
- What adjustments can be made to the administration of the task to ensure no students are unfairly disadvantaged due to special needs?

Tips:

- *Make sure that all students can engage with the task instructions by:*
 - » *Checking that the task difficulty matches your students' ability levels (i.e., not too easy and/or not too hard for the majority of students)*
 - » *Ensure the instructions are clear and free of unnecessary complexity.*
- *To confirm the instructions are clear:*
 - » *Ask students to explain the task to each other while you listen for any confusion or misunderstanding*
 - » *Generative AI tools can help you simplify the language, so it matches your students' reading levels, interests and needs.*

Step 4: Determine what an authentic performance and/or product looks like.*Ask yourself:*

- How will my students respond to the instructions provided? What will they be required to do, say, write and/or build to demonstrate their learning?
- How will their responses to the instructions illustrate:
 - » what they know and can do, and what they need to do next to progress in their learning (i.e., if the evidence is to be used for formative assessment purposes); and/or
 - » attainment against the intended learning outcomes, general capabilities, values and/or dispositions specified in the curriculum (i.e., if the evidence is to be used for summative assessment purposes)?
- How will you judge the quality of the students' performance and/or product? (e.g., marking criteria, a scoring rubric)?

Tips:

- *If conducting assessment for formative assessment purposes, create a developmental scoring rubric. Make this available to students prior to the assessment (see resources 20 and 21).*
- *Check with the students that they understand the content of the rubric and how it will be used.*

Step 5: Refine*Ask yourself:*

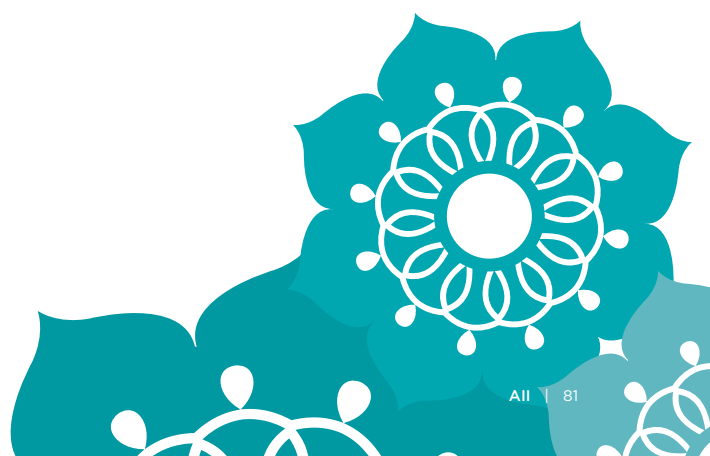
- Have you discussed your task idea with your teaching peers and industry colleagues? Can they suggest ways to make the task more relevant or aligned with current practice? Can you share assessment tasks with other teachers inside or outside of your school? (See element 1 Applied Learning Ecosystem)
- Will students see the relevance of what they are learning and demonstrating?
- Does the task...
 - » meaningfully reflect real-world challenges. How can it be more realistic?
 - » promote high order thinking skills and the application of transversal skills such as problem solving, communication skills, organisational skills?
 - » measure the full range of abilities of my students?
 - » provide opportunities for all my students to demonstrate where they are at in their learning?
 - » clearly measure the intended learning outcomes of the curriculum?

Tips:

- *Ask experts to review the task before you use it (e.g., industry partners, other teachers).*
- *When reviewing, check:*
 - » *Are the instructions clear and easy to follow?*
 - » *Do the task requirements relate to real-life situations that make sense for students?*
 - » *Do the rubrics match the intended learning outcomes and other important aspects of the curriculum?*
 - » *Do the rubrics clearly differentiate students' ability levels along a developmental continuum of learning*
 - » *Is the language fair and accessible for all students? Make sure nothing in the task, rubric or required resources will disadvantage any group of students (e.g., students with disabilities, different language background or limited access to workplaces).*

Note on process:

The creation of developmental assessment rubrics is an ongoing and iterative process. Rather than treating rubrics as fixed tools, you are encouraged to review and refine them over time based on how they function in practice. This may include reflecting on student work, engaging in moderation discussions, and considering feedback from colleagues and learners.





4.2. CHECKLISTS FOR CREATING AND EVALUATING DEVELOPMENTAL RUBRICS

Rubrics should show a learning progression. This helps students see where they are in their learning and what their next steps should be.

If written well, developmental rubrics can have the following benefits for teachers and students:

- **Clarify expectations:** Rubrics define what aspects of the students' work will be assessed as well as how it will be assessed in terms of quality.
- **Enhance fairness and consistency:** By providing clear descriptions for each proficiency level, rubrics can minimise subjective biases and increase the consistency of scoring across different teachers.
- **Streamline marking:** Rubrics provide a standardised process for judging students' work. This can speed up the process for marking a large number of students' work, particularly when they are complex.
- **Facilitate feedback:** Rubrics can assist teachers (as well students in peer-assessment) to provide focused, constructive feedback that is aligned to specific criteria.
- **Support further learning:** Rubrics can support teachers to provide scaffolding to students to meet their individual learning needs.
- **Ensure curriculum alignment:** Rubrics can help ensure that assessments are aligned to the intended learning outcomes, capabilities, values and/or dispositions specified in the curriculum.
- **Encourage self-assessment and reflection:** Rubrics can help students to evaluate their own work against explicit criteria, equipping them to regulate their own learning.

The first checklist has been created to help you design developmental rubrics and the second has been designed to help you evaluate the effectiveness of a rubric that you have developed or one that you have sourced elsewhere. (For an example rubric see resource 4.3 and for more information on rubrics, see Assessment background notes.)





CHECKLIST FOR CREATING A DEVELOPMENTAL RUBRIC

Purpose: Use this checklist to help you create your own developmental rubrics for use with your students in an applied learning context.

1. Define the Purpose of the Rubric

- ☐ Clarify the intended learning outcomes, capabilities, values and/or dispositions the rubric will assess
- ☐ Decide whether the rubric will be used for a formative or summative purpose
- ☐ Identify the expected range of ability of the target students (e.g., grade level)
- ☐ Determine the type of rubric to be developed:
 - ☐ outcomes-specific rubric (e.g., to assess a competency such as communication skills irrespective of which assessment tasks are used to gather evidence of learning); or
 - ☐ task-specific rubric (e.g., key components of a portfolio, project etc).

2. Identify Assessment Criteria

- ☐ Break down the task (e.g., portfolio) or the learning outcomes (e.g. communication skills) into distinct, observable behaviours that are expected to be demonstrated by the target group of learners (note this should not be an exhaustive list, but instead an indicative list of behaviours expected to be demonstrated by the target group to meet the intended learning outcomes within the curriculum)
- ☐ Use clear, unambiguous, descriptive language for each criterion.

3. Define Developmental Proficiency Levels for each Assessment Criterion

- ☐ For each assessment criterion, describe at least three levels of proficiency that show differences between students who possess emerging skills/knowledge in the area and those who possess advanced levels.
- ☐ Refer to existing developmental taxonomies (e.g., Bloom's Cognitive Taxonomy, Dreyfus and Dreyfus (1980) Skill Acquisition Model) to help you articulate different levels of proficiency.
- ☐ Write these proficiency level statements using specific, observable and measurable language (e.g., use verbs).
- ☐ Focus on qualitative changes (e.g., how performance typically improves from novice to expert) as opposed to quantitative differences (e.g., more or less). You can do this by avoiding the use of adjectives.
- ☐ Use positive language to describe what students can do, say, write or create at each level (i.e., not what they can't do).
- ☐ Order these statements in terms of increasing levels of proficiency.
- ☐ Check that the statements show a clear developmental sequence (i.e., each level builds on the previous one).

4. Ensure Clarity and Meaningfulness

- ☐ Use language that reflects real-world application.
- ☐ Avoid vague words like "sound" or "thorough" that are subjective.
- ☐ Make sure the proficiency statements are meaningful and observable to both teachers and students.
- ☐ Check whether multiple people would interpret the proficiency statements in a similar way.
- ☐ Check that the proficiency levels for each criterion are internally coherent (i.e., measuring growth along the same developmental learning continuum).

5. Pilot and Revise

- ☐ Gather feedback from students and other teachers on clarity and usefulness.
- ☐ Pilot the rubric with a sample of students' work to check that it can differentiate students with varying levels of proficiency.
- ☐ Revise proficiency level statements where assessors disagree or where the progression seems unclear.
- ☐ Ensure alignment with the intended learning outcomes, assessment criteria and/or instructional activities of the authentic assessment task.



CHECKLIST FOR EVALUATING A DEVELOPMENTAL RUBRIC

Purpose: Use this checklist to help you evaluate your own or others' developmental rubrics for use with your students in an applied learning context.

1. Relevant and Meaningful for Formative Use in Applied Learning Contexts

- ☐ Does the rubric assess beyond knowledge (e.g., the 'know how' and 'know why', as opposed to just the 'know what')?
- ☐ Are the criteria reflective of real-world conditions and practices?
- ☐ Is the rubric designed to promote learning and reflection, not just grading?
- ☐ Does the rubric show how students progress in their learning over time (e.g., from novice to expert)?
- ☐ Does each assessment criterion directly align with the:
 - ☐ intended learning outcomes, capabilities, values and/or dispositions specified within the curriculum (if using outcome-specific rubrics); or
 - ☐ key components of the task (which in turn, should be mapped to the intended learning outcomes, capabilities, values and/or dispositions within the curriculum)?

2. Reflect the Learning Progression

- ☐ Does the rubric show how performance typically develops over time (e.g., from novice to proficient to expert)?
- ☐ Are the proficiency level statements written as developmental stages, (i.e., NOT checklists of tasks to be performed in sequential order)?
- ☐ Do levels show increasing depth, independence and transferability of learning to new contexts?

3. Focus on Observable, Meaningful Real-world Behaviours

- ☐ Are the proficiency level statements framed around what students do (i.e., process) or produce (not just what they 'know')?
- ☐ Are the behaviours authentic to the task (e.g., oral presentation of findings)?
- ☐ Are the statements free of vague adjectives (e.g., 'limited understanding', 'sound understanding', 'thorough understanding')?
- ☐ Does the rubric focus on quality, not quantity? (e.g., instead of counting the number of spelling errors in a business plan, focus on the type of errors made if spelling errors are important in the real world application of the task and are linked to the intended learning outcomes)

4. Ensure Clarity and Differentiation

- ☐ Do the proficiency level statements clearly differentiate each stage of learning?
- ☐ Do the proficiency levels reflect an existing developmental taxonomy (e.g., Bloom's Taxonomy, Dreyfus and Dreyfus' Model of Skill Acquisition)?
- ☐ Does each level statement describe observable evidence that distinguishes it from the next?
- ☐ Are there no more than 4 or 5 proficiency levels per criterion, so differences remain clear?
- ☐ Is language consistent and understandable for both teachers and students?

5. Support Feedback and Student Reflection

- ☐ Does the rubric identify next steps or strategies for improvement (e.g., can scaffold statements be written for each proficiency level to help students progress to the next level)?
- ☐ Does the rubric help students self-assess and reflect on their learning progress?
- ☐ Does it enable incremental improvements in learning to be recognised and reported?
- ☐ Does it value process as well as the product (e.g., planning, problem solving, teamwork)?

6. Check for Validity, Fairness and Authenticity

- ☐ Is the rubric aligned with real-world conditions or practices of the discipline/industry?
- ☐ Does it accommodate diverse ways students can demonstrate applied learning? (Note this is only applicable if the rubric is designed to measure a competency and is task-free, otherwise, a separate set of rubrics need to be developed for alternative assessment tasks that cater for individual needs of students).
- ☐ Is it free from bias (language, access to resources, cultural assumptions)?
- ☐ Does it produce credible, consistent judgements across different assessors (e.g., students, teachers)?



4.3. EXAMPLE OF AN OUTCOME-BASED DEVELOPMENTAL LEARNING RUBRIC

Outcome-based rubrics are linked directly to the intended learning outcomes in the curriculum. These rubrics assess what students have learned and can demonstrate, no matter how they choose to show that learning. For example, in a mathematics class, students might show their understanding of problem solving through a written explanation, a presentation, or even a digital model. The rubric stays the same because it focuses on the learning outcome, not the task format.

Intended Learning Outcome	Novice	Advanced Beginner	Competent	Proficient	Emerging Expert
Describe how hardware, software & networks work together	<input type="checkbox"/> Lists the basic parts of computer systems	<input type="checkbox"/> Describes the functions of common components	<input type="checkbox"/> Explains how hardware, software and network systems interact	<input type="checkbox"/> Explains interactions using accurate concepts and real examples	<input type="checkbox"/> Diagnoses unfamiliar issues using knowledge of system interactions
Explain how data is transmitted across networks	<input type="checkbox"/> States that devices “connect to the internet”	<input type="checkbox"/> Describes simple transition methods (e.g., Wi-Fi, Cables)	<input type="checkbox"/> Describes data flow using correct terms (packets, routing)	<input type="checkbox"/> Applies networking concepts to explain given scenarios	<input type="checkbox"/> Predicts or models data behaviour in complex network solutions
Collect, organise & validate data	<input type="checkbox"/> Enters data accurately using instructions	<input type="checkbox"/> Organises data into tables or spreadsheets	<input type="checkbox"/> Selects appropriate formats & validates data for accuracy	<input type="checkbox"/> Designs structured data sets for specific purposes	<input type="checkbox"/> Constructs advanced data structures or automated data processes
Analyse & interpret data	<input type="checkbox"/> Identifies information from simple graphs	<input type="checkbox"/> Identifies patterns in familiar data	<input type="checkbox"/> Applies formulae & charts to analyse	<input type="checkbox"/> Interprets data to justify decisions	<input type="checkbox"/> Evaluates data quality & derives deeper insights
Create appropriate data visualisations	<input type="checkbox"/> Reproduces a visualisation using a provided template	<input type="checkbox"/> Selects an appropriate chart type from given options	<input type="checkbox"/> Creates suitable visualisations without guidance	<input type="checkbox"/> Refines visualisations for clarity, accuracy & audience needs	<input type="checkbox"/> Designs high-quality data presentations for real users
Identify & explain cybersecurity threats	<input type="checkbox"/> Lists basic cybersecurity risks	<input type="checkbox"/> Describes common threats with examples	<input type="checkbox"/> Explains how different threats operate	<input type="checkbox"/> Analyses risks in provided scenarios	<input type="checkbox"/> Evaluates a system's security posture & anticipates vulnerabilities

Intended Learning Outcome	Novice	Advanced Beginner	Competent	Proficient	Emerging Expert
Apply protective cybersecurity strategies	<input type="checkbox"/> Uses strong passwords with guidance	<input type="checkbox"/> Applies basic security strategies independently	<input type="checkbox"/> Selects appropriate strategies for different situations	<input type="checkbox"/> Designs a security plan for a given scenario	<input type="checkbox"/> Reviews and improves existing security measures
Design algorithms (flowcharts, pseudocode)	<input type="checkbox"/> Follows simple algorithms step-by-step	<input type="checkbox"/> Modifies or extends given algorithm examples	<input type="checkbox"/> Designs multi-step algorithms that meet requirements	<input type="checkbox"/> Designs efficient, structured algorithms using good practices	<input type="checkbox"/> Develops optimised algorithms using functions or modular structures
Develop programs (sequence, selection, loops, functions)	<input type="checkbox"/> Writes code by following explicit instructions	<input type="checkbox"/> Edits and adapts example code	<input type="checkbox"/> Creates original programs using logic and control structures	<input type="checkbox"/> Builds programs with reusable components & organised structure	<input type="checkbox"/> Develops robust applications with modular coding and testing
Debug & refine programs	<input type="checkbox"/> Fixes issues when told the cause	<input type="checkbox"/> Applies simple fixes (e.g. typos, missing steps)	<input type="checkbox"/> Uses logical debugging processes to identify and fix errors	<input type="checkbox"/> Refactors for efficiency, readability, maintainability	<input type="checkbox"/> Troubleshoots unfamiliar or complex problems independently
Plan & manage an IT project	<input type="checkbox"/> Follows a provided project plan	<input type="checkbox"/> Completes assigned tasks with some independence	<input type="checkbox"/> Creates a project plan and documents progress	<input type="checkbox"/> Manages testing, iteration & deadlines	<input type="checkbox"/> Leads an entire project from planning to completion
Design & create a digital product	<input type="checkbox"/> Creates simple digital content from instructions	<input type="checkbox"/> Produces basic digital products	<input type="checkbox"/> Designs multi-component digital solutions	<input type="checkbox"/> Improves products for usability & accessibility	<input type="checkbox"/> Develops high-quality, integrated digital solutions
Evaluate digital products	<input type="checkbox"/> Lists what they like or dislike about a product	<input type="checkbox"/> Explains what they like and dislike by providing explicit examples	<input type="checkbox"/> Evaluates product using defined criteria	<input type="checkbox"/> Produces detailed critiques & proposes redesigns	<input type="checkbox"/> Conducts user-centred evaluation & recommends improvement
Demonstrate responsible digital citizenship	<input type="checkbox"/> Follows rules when told	<input type="checkbox"/> Applies basic safe and ethical behaviours	<input type="checkbox"/> Makes responsible decisions independently	<input type="checkbox"/> Evaluates ethical and legal consequences	<input type="checkbox"/> Advocates for and models safe and ethical digital practice

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4.4.1. A GUIDE FOR CONDUCTING FORMATIVE ASSESSMENT

Black and Wiliam (2009) suggest that it is useful for teachers and students to think about formative assessment in terms of three broad questions:

- Where are we going?
- Where are we now?
- How will we get there?

Both students and teachers have a key role in addressing each of these three questions.

	Where the learner is going	Where the learner is right now	How to get there
Teacher	Clarifying learning intentions and criteria for success	Designing applied learning and assessment activities that elicit evidence of students' current knowledge, understanding and skills	Providing targeted feedback that moves a learner forward
Peer	Understanding and sharing learning intentions and criteria for success	Activating students as instructional resources for one another	
Learner	Understanding learning intentions and criteria for success	Activating students as owners of their own learning (<i>i.e., self-regulated learning</i>)	



The guide below provides some suggestions of how teachers can work with their students to address each of these questions. It includes suggested activities for a teacher to implement (pink boxes). The subsequent resource 4.4.2 suggests what it would look like in practice (blue boxes).

1. WHERE ARE WE GOING?

Aim: To establish clear learning progressions, meaningful learning goals and explicit success criteria that guide both teaching and student learning.

1. Define the learning pathway

1.1 Understand how learning typically develops

- Map out how students' skills and understanding in your subject area usually grow over time.
- Break this development into small, manageable steps that students commonly take as they move from beginner to proficient.
- Consider common misconceptions and typical challenges students face along the way.

1.2 Set clear learning goals for each lesson

- Identify what students should know, understand and be able to do by the end of the lesson.
- Phrase goals in student-friendly language to support clarity and motivation.
- Keep the number of goals manageable to maintain focus.

1.3 Write success criteria

- Describe what successful learning looks like when the goal is achieved.
- Make these criteria observable, specific and measurable.

2. Create a developmental learning rubric (see resource 4.2 for guidance)

- Define the purpose of the rubric.
- Identify assessment criteria.
- Define development proficiency levels for each assessment criterion.
- Ensure clarity and meaningfulness.
- Pilot and revise.

3. Share and use the goals, criteria and rubric with students

- Introduce the learning goals, success criteria and rubric at the start of the lesson.
- Discuss the goals, success criteria and rubrics with students so they understand what matters and where to focus their efforts.
- Revisit the goals, success criteria and rubric during learning and use them for reflection at the end.

Tips:

Use your expertise

- Draw on your own experience teaching the subject to define the learning progression and rubrics.
- If you are new to teaching in this area, consult with peers and/or search the scholarly literature to help you define the learning progression.

Align with curriculum

- Align the learning goals and success criteria to the intended learning outcomes, capabilities, values and/or dispositions specified in the curriculum.

Check clarity and quality

- Use the Checklists in resource 4.3 to ensure your rubric is clear, valid and can serve a formative assessment function.

2. WHERE ARE WE NOW?

Aim: To elicit evidence of learning to identify each student's Zone of Proximal Development (ZPD). This will help target instruction so that all students are challenged just beyond what they can do independently whilst still receiving the support they need to succeed.

1. Plan to collect evidence of learning

- Build intentional checkpoints into your lesson plan to gather evidence of students' progress.
- Ensure these checkpoints align with the learning goals and success criteria.
- Avoid leaving assessment to chance. Ensure you plan when and how you will observe or capture evidence of learning.

2. Use authentic assessment tasks (see resource 4.1 for guidance)

- Integrate meaningful tasks that show how students apply their knowledge and skills in the real world, not just recall facts.
- Use activities such as problem solving, performance tasks, demonstrations that have real-world applications.

3. Continuously monitor knowledge, skills & understanding using the rubric

- Observe students as they work to identify strengths, misconceptions and emerging competencies.
- Use targeted, purposeful questioning to check depth of understanding and/or skill development.
- Pay attention to how students respond to instructions (i.e., with confidence, uncertainty or reliance on cues/prompts).
- Continue to refer to the developmental rubric when monitoring students' learning.

4. Provide scaffolding within the Zone of Proximal Development

- Offer support that helps students move from needing assistance to apply their knowledge and skills to real-world activities, to independent performance.
- Adjust the level of support as students progress.

Tips:

Observe independent performance

- Watch how students tackle tasks on their own. Take notes of which tasks they can complete independently and where they struggle.
- Look for patterns in errors or hesitations which may indicate that the activity is 'just beyond' their current abilities.

Use targeted probing questions

- Ask students to explain their thinking, justify a choice or describe their strategy.
- Gradually scaffold questions to see whether they respond with minimal support.

Compare to the development learning rubric

- Use the rubric to interpret what students are currently doing, saying and/or producing and what the next step in their progression should be.

Adjust scaffolding based on need

- When a student struggles, offer hints, prompts or modelling.
- Watch whether they complete the task with this support. This indicates the task is within their ZPD.
- Reduce or increase scaffolding depending on their response.

3. HOW WILL WE GET THERE?

Aim: To provide timely and constructive feedback to move students forward. To do this successfully, teachers will need to use assessment data to adjust their teaching and learning activities to ensure they are scaffolding within a student's Zone of Proximal Development (ZPD). They will also need to create a positive learning environment where students feel confident to take risks and to engage in self and peer assessment.

1. Provide immediate and constructive feedback

- Give timely and specific feedback as soon as possible after an assessment and/or learning activity. This helps students understand what they did well and what they can improve on right away.
- Align the feedback to the student's learning goals and the rubric.
- Offer actionable next steps. Instead of just pointing out mistakes, guide students on how they can improve by referring to the developmental rubric.

2. Use assessment data to adjust your teaching and learning activities

- Match activities with ability levels. Pay attention to how students are performing and adjust the complexity of the task accordingly. If a student is struggling, simplify the task or provide more support. If a student is excelling, offer them more challenging activities to enhance their knowledge, understanding and skills.
- Provide scaffolding within each student's Zone of Proximal Development. Offer help just beyond what the student can do independently so they can learn with the right amount of challenge but also with enough assistance.
- Address misconceptions quickly to ensure students obtain the necessary foundational skills and knowledge to progress in their learning.

3. Foster a safe and support classroom culture

- Build routines and norms that encourage students to share ideas, strategies and work samples.
- Model curiosity and openness so students feel comfortable expressing their thinking and/or demonstrating their skills.

4. Encourage productive risk taking

- Emphasise that errors and misunderstandings are natural parts of the learning process.
- Normalise mistakes by discussing them openly and using them as learning opportunities.

5. Reframe assessment as a tool for growth

- Help students understand that assessment is not about grades or marks.
- Highlight how feedback and rubrics guide them toward improvement in their skills and deeper understanding.

6. Teach students to use the rubric for self-assessment

- Guide students in comparing their work to the rubric's proficiency levels.
- Help them identify specific strengths and areas that need further development.
- Encourage students to write actionable next steps based on the rubric.

7. Incorporate peer review activities

- Provide structured opportunities for students to assess their peer's work.
- Teach students how to receive and respond to feedback respectfully and productively.

Tips:

Make thinking visible

- Use open-ended questions or strategies such as think-pair-share to encourage students to articulate their reasoning.

Provide early access to the rubric

- Ensure students have access to the rubric at the start of the learning cycle so they understand expectations from the outset.

Use model exemplars

- Show examples of students' work at various proficiency levels to illustrate what different levels of the rubric look like in practice.

Use growth-orientated language

- Choose phrases that signals mistakes show progress (e.g., *This shows what you are ready to learn next*).

Praise effort and progress

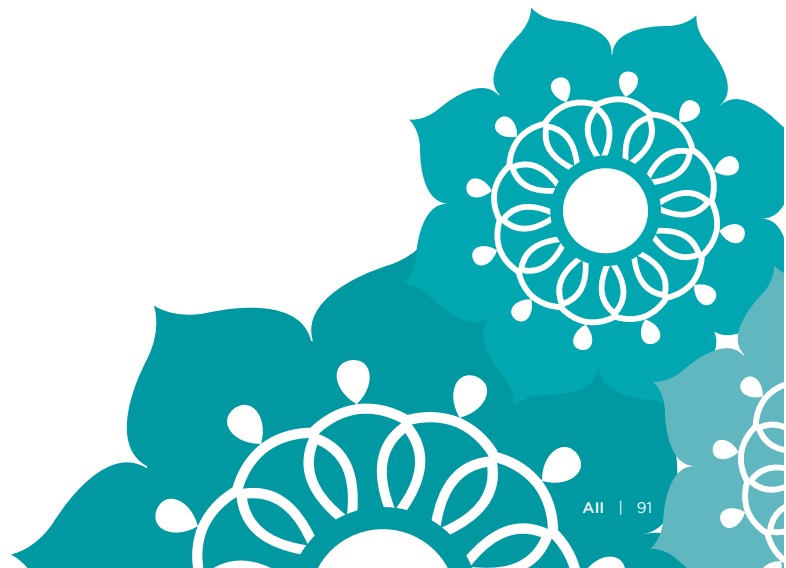
- Use rubric language to acknowledge improvement and reinforce a focus on growth.

Be selective in providing feedback

- Highlight one or two areas for improvement rather than overwhelming the student with everything at once.

Adjust learning activities

- Keep the same learning goal for the class but set different learning challenges for each student within their ZPD.
- If you have a large class, pair or group students strategically so your stronger students can scaffold those who are less confident.





4.4.2. EXAMPLE OF FORMATIVE ASSESSMENT IN PRACTICE

IN PRACTICE: WHERE ARE WE GOING?

Organised by Learning Progression, Learning Goals and Success Criteria

The Context:

- **Target Group:** 15 year old students enrolled in an Information Technology subject at school.
- **Curriculum Areas:** Digital systems, data and information, cybersecurity, programming/algorithms, digital solutions and project skills, digital citizenship
- **Underpinning Developmental Learning Taxonomy to Guide the Development of the Learning Progression:** Dreyfus & Dreyfus (1980) Skill Acquisition Model

1. Novice (beginner)

Follows rules exactly; needs clear instructions; limited context.

Students at this stage typically:

- Identify basic computer components and simply terminology
- Follow step-by-step instructions to complete tasks (e.g saving files, formatting documents)
- Recognise simple cybersecurity issues (e.g., “use strong passwords”)
- Use digital tools only when instructions are explicit.
- Solve problems by applying given procedures without understanding “why”

Learning Goal:

- To identify basic parts of a computer and follow clear steps to complete simple digital tasks.

Success Criteria:

- Can name key hardware (e.g., keyboard, mouse, monitor) and software (apps, files).
- Can complete a task by following step-by-step instructions.
- Can use a strong password with teacher support.
- Can save, open and organise files when the steps are given.

2. Advanced beginner

Begins to notice patterns, can apply rules in familiar contexts but still relies on guidance.

Students at this stage typically:

- Explain simple functions of hardware, software and networks by naming them.
- Apply basic cybersecurity habits independently (privacy settings, safe browsing).
- Use common software tools for familiar tasks without needing each step explained.
- Collect and organise data using basic digital methods.
- Begin experimenting with code using examples or templates.
- Identify common issues and try known fixes (e.g., restart, check connections).

Learning Goal:

- For these students to use common digital tools on their own and follow basic rules to stay safe online.

Success Criteria:

- Can choose the right software for a familiar task (e.g., spreadsheet, presentation).
- Can adjust privacy or safety settings with little assistance.
- Can organise simple data (e.g., tables, lists).
- Can write short programs using examples or templates.
- Can solve simple device issues using known fixes).

3. Competent

Can plan, prioritise and make decisions. Understands the 'why' behind processes.

Students at this stage typically:

- Connect concepts (e.g., how networks move data, how hardware and software interact).
- Plan and create complex digital products (e.g. webpages, multimedia presentations).
- Analyse data using digital tools, choosing appropriate graphs or formulas.
- Break down problems logically and create simple algorithms (e.g. flow charts)
- Debug programs by analysing what is happening (i.e., not simply guessing).
- Justify their choice of tools or methods for a task.

Learning Goals:

- To choose the right tools and explain their choices.
- Create digital solutions that show their understanding.

Success Criteria:

- Can explain how digital systems (hardware, software, networks) work together.
- Can break a problem into steps and plan a solution.
- Can write and debug a program by checking logic.
- Can analyse data and choose appropriate graphs or formulas.
- Can justify why they select tools or methods.

4. Proficient

Sees the big picture, can adapt strategies to new situations, uses judgement and not just rules.

Students at this stage typically:

- Explain digital systems and network processes with understanding of underlying concepts.
- Design and develop digital solutions with multiple components (e.g., game plus interface, website plus database).
- Evaluate risks and propose cybersecurity strategies based on scenario analysis.
- Optimise and refine code for efficiency, readability and user needs.
- Manage small IT projects (planning, testing, documentation, iteration).
- Apply ethical, legal and safety principles to real or simulated scenarios.

Learning Goal:

- To design and improve digital solutions by using your own judgement, solving problems and thinking like an IT professional.

Success Criteria:

- Can design a digital product with more than one component (e.g. website plus graphics).
- Can refine code so it is efficient and easy to read.
- Can evaluate cybersecurity risks and suggest practical solutions.
- Can manage an IT project.
- Can make decisions based on what will work best for the user.

5. Emerging expert

Demonstrates intuitive grasps of IT concepts. Works fluidly and efficiently, self-directs learning.

Students at this stage typically:

- Think flexibly across multiple IT domains (programming, data, networks, security)
- Troubleshoot unfamiliar problems by drawing on deep understanding rather than fixed rules.
- Develop functional applications using intermediate programming structures (functions, user defined logic).
- Design solutions with awareness of user experience, accessibility and efficiency.
- Independently plan, execute and evaluate digital projects with minimal guidance.
- Anticipate risks, constraints and implications in IT design decisions.

Learning Goals:

- To independently design and implement complex digital solutions

Success Criteria:

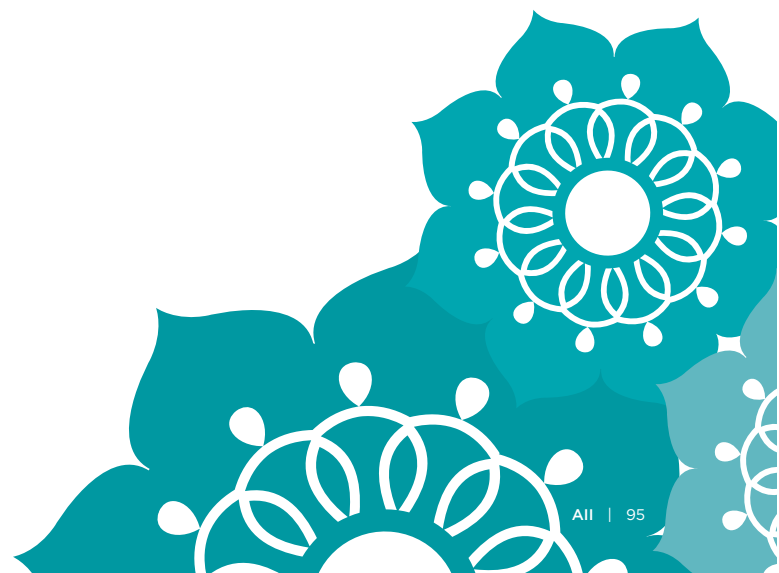
- Can design digital products with multiple parts (e.g website with interactive features and data).
- Can improve code to enhance efficiency and clarity.
- Can evaluate cybersecurity risks and develop strategic solutions with consideration to immediate and long-term implications.
- Can manage IT projects throughout all stages.
- Can make informed decisions that prioritises user needs, anticipates future challenges, and incorporates ethical considerations in digital solutions.

IN PRACTICE: WHERE ARE WE NOW?**1. Plan to Collect Evidence of Learning**

The teacher plans precise checkpoints aligned to the rubric and learning goals (see example task specific rubric below).

Example: Lesson Plan Checkpoints

Lesson Stage	Intentional Evidence Check	What the teacher looks for (see Rubric for further details)
Warm-up/prior knowledge	Prompt: "list 3 things that make a webpage easy or difficult for users" (5 minute quick write).	<i>Novice:</i> Lists surface features (e.g. colours, buttons, pictures). <i>Advanced Beginner:</i> identifies basic usability rules (e.g text should be readable, navigation should be simple)
Mini-task 2: Reviewing the existing website	Students complete a "Critique Checklist" identifying usability issues on the original website	<i>Novice:</i> Identifies surface issues and completes checklist minimally <i>Advanced Beginner:</i> Identifies functional problems (e.g broken links, confusing menus) and applies checklist steps accurately. <i>Competent:</i> Connects usability issues to user needs and can explain impacts (e.g., A parent trying to find key opening times would struggle....")



Lesson Stage	Intentional Evidence Check	What the teacher looks for (see Rubric for further details)
Mini-task 3: Sketching Redesigned Wireframes	Students sketch a new homepage and one sub-page based on identified user needs	<p><i>Novice:</i> Requests step-by-step guidance and produces incomplete sketches ("where do I put this tag?")</p> <p><i>Advanced Beginner:</i> Follows templates and produces basic patterns layouts.</p> <p><i>Competent:</i> Creates functional wireframes independently and corrects minor issues</p> <p><i>Emerging Expert:</i> Optimises usability and streamlines flows</p>
Mini-task 4: User Testing Simulation	Students test their webpage with a peer acting as the target user.	<p><i>Advanced Beginner:</i> Notices visible user actions (e.g., "They could not find the button")</p> <p><i>Competent:</i> Interprets user actions and frustration points and infers causes.</p> <p><i>Proficient:</i> Diagnoses root causes ("The visual hierarchy did not match user intent").</p>
Exit Ticket	Prompt: "What design changes would you make after user testing? Why?"	<p><i>Advanced Beginner:</i> States aesthetic preferences.</p> <p><i>Competent:</i> Justifies decisions using user needs</p> <p><i>Emerging Expert:</i> Evaluates evidence, substantiates decisions with data and justifies proposed refinements.</p>
This avoids 'hoping learning shows up' and makes evidence collection systematic		

2. Using Authentic Assessment Tasks

The teacher selects tasks that reveal how students apply IT knowledge, understanding and skills.

Scenario (A web redesign task)

A local café, sports club, or school department has an outdated website. Students are asked to redesign the homepage so it:

- Improves usability
- Works on a mobile phone
- Reflects the business's goals
- Meets accessibility expectations.

Instructions to students.

You are required to:

- Interview or email the 'client' (teacher roleplays if necessary)
- Identify the user needs (customers, parents, teenagers etc)
- Create sketches/wireframes
- Build a prototype using HTML/CSS or a web builder
- Justify design decisions.

This task mimics what a junior web designer would be required to do in industry.

3. Continuously Monitor Knowledge, Skills and Understanding

A. Observe students as they work

Throughout the web redesign task, the teacher walks around the room with a clipboard or digital notes app that displays the task-specific rubric.

Using the rubric, the teacher looks for:

- How students choose layout, fonts, colours
- Whether they can justify design decisions
- Whether they use rules mechanically or show deeper reasoning
- How independently they operate software (e.g., Canva, HTML/CSS, Figma etc)

Example Classroom Snapshot

- **Student A** immediately drags a pre-built template into their design and begins replacing text.
- The teacher notes "relies on templates, minimal adaptation (Advanced Beginner level)"
- **Student B** sketches their own layout before going to the computer.
- The teacher notes: "shows planning and intention (possibly Competent)".
- **Student C** hesitates, staring at the blank canvas and waits for further instructions.
- The teacher notes "needs cues to begin (Novice)"

A. Use targeted, purposeful questioning

The teacher stops at each student for 1 or 2 minutes and asks questions tailored to what they are currently producing.

Examples of probing questions

- *"Why did you choose this layout for the homepage?"*
» Reveals whether they can justify decisions (i.e., Competent)
- *"Who is your main user, and how do they find what they need?"*
» Reveals ability to think about user needs (i.e., Proficient)
- *"What would happen if a mobile user viewed this?"*
» Checks system thinking and anticipatory reasoning (i.e., Emerging Expert)

Typical students' responses and what they reveal

- **Novice:** "I picked it because it looks nice."
- **Advanced Beginner:** "Templates say this one is for businesses."
- **Competent:** "The business needs customers to see the menu first, so I'm simplifying the navigation."
- **Proficient:** "Kids often access the site on phones, so I am simplifying the navigation."
- **Emerging Expert:** "I tested it with a classmate. The navigation took 7 seconds. I am restructuring it to reduce cognitive load."

B. Notice how students respond to instructions

The teacher gives the class a short instruction: "Add a mobile-responsive version of your homepage".

The teacher then observes the students' reactions.

What the Teacher Notes:

- **Novice:** Looks uncertain, waits for demonstration
- **Advanced Beginner:** Tries but mimics previous examples
- **Competent:** Experiments with flexible layouts
- **Proficient:** Adjust structure for readability and accessibility
- **Emerging Expert:** Tests on different screen widths, self-initiates refinements

These behaviours indicate the students' current level and next steps required.

4. Provide Scaffolding within each student's Zone of Proximal Development (ZPD)

A. Offer support that moves students toward independence.

Teacher scaffolds include:

- Hint ("where would someone look first?")
- Prompt ("who is your user?")
- Guided demonstration (short, focused)
- Modelled example (quick sketch of a layout)
- Think-aloud ("if I were a customer.....")
- The teacher intentionally gives just enough support so that the student can continue but does not take over the task.

B. Adjust support as students progress

Example: Adaptive scaffolding based on student performance

Student A: (Advanced Beginner)

Struggles choosing a layout

- The teacher gives a limited prompt: *"What information does a business want customers to find first?"*
- If they respond confidently, then the teacher reduces support.
- If they remain silent, the teacher provides a simple graphic organiser to help the student structure the content.

Student B: (Competent)

- Has a plan but struggles with mobile layout.
- The teacher offers a conceptual scaffold: *"Think about thumb zones and readability. What changes on a smaller screen?"*
- The student continues independently and the teacher provides no further help.

Student C: (Proficient)

- Producing strong layout decisions.
- The teacher gives an extension challenge: *"Test your design with a peer and identify one improvement to accessibility"*
- This helps lift the student into the next proficiency level.



EXAMPLE: WHERE ARE WE NOW? (TASK SPECIFIC RUBRIC)

The Context:

- **Unit:** Building a simple interactive website/app
- **Learning Outcomes:** Students redesign a functional web page/app interface demonstrating user-centred design, basic coding competency, testing and bugging.
- **The Task Specific Rubric**

Assessment Criteria	Novice	Advanced Beginner	Competent	Proficient	Emerging Expert
Identifies and Understands User needs	<input type="checkbox"/> Lists surface features, states likes and dislikes	<input type="checkbox"/> Identifies basic usability rules and describes general functionality	<input type="checkbox"/> Identifies specific user needs and justifies design choices using user goals	<input type="checkbox"/> Predicts user navigation patterns and explains trade-offs based on behaviour	<input type="checkbox"/> Analyses evidence to anticipate issues and propose refined solutions
Analyses an Existing Website	<input type="checkbox"/> Identifies surface issues	<input type="checkbox"/> Identifies functional problems and applies checklist steps accurately	<input type="checkbox"/> Connects usability issues to user needs and explains impact	<input type="checkbox"/> Analyses root causes and impacts of usability issues	<input type="checkbox"/> Prioritises issues, predicts user errors and proposes evidence-based fixes
Undertakes Sketching and Wireframing	<input type="checkbox"/> Requests step by step guidance	<input type="checkbox"/> Follows templates and produces basic patterned layouts	<input type="checkbox"/> Creates functional wireframes independently and corrects minor errors	<input type="checkbox"/> Refines layout hierarchy and adapts designs for mobile responsiveness	<input type="checkbox"/> Optimises usability, streamlines flows, and iterates based on predicted behaviour
Builds the Prototype (HTML/CSS or Web Builder)	<input type="checkbox"/> Copies demonstrated steps and relies on explicit direction	<input type="checkbox"/> Applies learning patterns and modifies simple components	<input type="checkbox"/> Builds custom layouts, adapts code/ components and experiments to solve issues	<input type="checkbox"/> Constructs responsive structures and adjusts layout for accessibility and devices	<input type="checkbox"/> Tests across devices, diagnoses inefficiencies and enhances structure and CSS independently
Conducts User Testing and Interpretation	<input type="checkbox"/> Lists visible user actions	<input type="checkbox"/> Describes what occurred but does not interpret reasoning	<input type="checkbox"/> Interprets behaviour, identifies frustration points and infers cause	<input type="checkbox"/> Diagnoses root causes and explains them using design principles	<input type="checkbox"/> Evaluates test data, recommends specific refinements and predicts design impacts
Explain and Justifies Design Decisions	<input type="checkbox"/> States aesthetic preferences	<input type="checkbox"/> Provides template-led explanations	<input type="checkbox"/> Justifies decisions using user needs and explains how choices support goals	<input type="checkbox"/> Integrates research and principles to explain design rationale	<input type="checkbox"/> Evaluates evidence, substantiates decisions with data and justifies proposed refinements
Independence and response to instructions	<input type="checkbox"/> Stops when uncertain and waits for instruction	<input type="checkbox"/> Attempts task by imitating examples and continues when prompted	<input type="checkbox"/> Works independently and applies learned strategies without examples	<input type="checkbox"/> Self-corrects, anticipates issues and implements feedback rapidly	<input type="checkbox"/> Initiates testing, refines designs proactively and extends tasks without prompting
Applies Design Thinking	<input type="checkbox"/> Focuses on appearance	<input type="checkbox"/> Applies rules mechanically and selects features by imitation	<input type="checkbox"/> Uses user goals to organise layout, structure content and shape interactions	<input type="checkbox"/> Tailors design to contexts, optimises layouts for different user groups	<input type="checkbox"/> Balances competing constraints, synthesises insights and makes changes to improve full user experiences

IN PRACTICE: HOW DO WE GET THERE?

1. Provide Immediate and Constructive Feedback.

Context: During the Wireframing Task where students are sketching redesigned homepage layouts

Teacher Actions:

- Circulates and gives quick, precise feedback to each student.
- References the rubric levels explicitly (e.g., “Right now you are working at Advanced Beginner because your structure is clear, but your layout is not tied to user needs yet”).

Gives actionable next steps:

- “Add a clear hierarchy for your target user. What should they see first? That will move you toward the Competent Level.”

How this moves learning forward:

- Students immediately refine their design instead of waiting for later.
- Feedback becomes a roadmap (“Here is where you are, and here is how to move to the next level”).

2. Use Assessment Data to Adjust Teaching Activities.

Context: During the Mini-checkpoint: Teacher reviews the Original Website and collects quick notes on each student's critique checklist

Teacher actions:

- Spots patterns:
 - » Some students only comment on colours (i.e., Novice)
 - » Others connect issues to user tasks (i.e., Competent)
- Adjusts the next activity accordingly:
 - » Students at Novice/Advanced Beginner get a 'Usability Lens Guide' to scaffold what to look for.
 - » Competent/Proficient students get an extension prompt: “Identify accessibility failures and propose fixes.”
- Scaffolding within ZPD
 - » Students struggling to identify user needs receive targeted prompts.
 - » Students who outperform get tasks that push them toward the next level.

How this moves learning forward:

- Every student works at the ‘just right’ level. That is, they are challenged but not overwhelmed.

3. Foster a Safe and Supportive Classroom Culture

Context: During the peer demonstration of prototypes where students are showing their early webpage layout to a peer.

Teacher Actions:

- Models curiosity (“Tell me why you placed your navigation here. Can you walk me through your thinking?”).
- Normalises imperfections (“this stage is about ideas, not perfection.”).
- Establishes classroom norms, (e.g.: “We focus on improvement, not judgement”).

How this moves learning forward:

- Students feel safe to share half-formed ideas.
- They stop viewing critique as ‘being wrong’ and start viewing it as an improvement tool.

4. Encourage Productive Risk-Taking

Context: During the building stage (HTML/CSS or visual builder)

Teacher actions:

- Praises attempts, not just successes:
 - » “I like that you tried a flexbox layout even though its new to you. That is a Competent Behaviour.”
- Uses mistakes in a positive way:
 - » Shares with the class an example of a non-working layout (with permission from the relevant student)
 - » “Let’s explore why the layout broke. We can learn new things when we troubleshoot”.

How this moves learning forward:

- Students become more willing to try new tools, tags, layout techniques.
- They shift from a fear of breaking things to “I learn new things when I troubleshoot”.

5. Reframe Assessment as a Tool for Growth

Context: During a checkpoint discussion before final submission

Teacher actions:

- Avoids talking about marks.
- Says things like:
 - » “Your user testing findings show you are working at ‘Competent’. Your next step is improving clarity of user pathways to move toward ‘Proficient’”.
- Shares with the class two de-identified student samples and shows the strengths and next steps using the rubric, not grades.

How this moves learning forward:

- Students see assessment as direction, not judgement.

6. Teach Students to Use the Rubric for Self Assessment

Context: During the refinement stage (after user testing)

Teacher actions:

- Asks students to refer to the development rubric at the beginning of the class.
- Asks them to highlight where they think they are for each criterion.
- Prompts them to self-assess by asking them
 - » “How did you identify user needs?”
 - » “Which element could be improved to reach the next level?”
- Models self-assessment language
 - » “My hierarchy is working (Competent) but my navigation is not intuitive yet. Next step: reorder menu items based on user priorities.”
 - » Requires them to write 3 actional steps tied to specific rubric levels.

How this moves learning forward:

- Students internalise learning goals and start driving their own improvement.

7. Incorporate Peer Review Activities

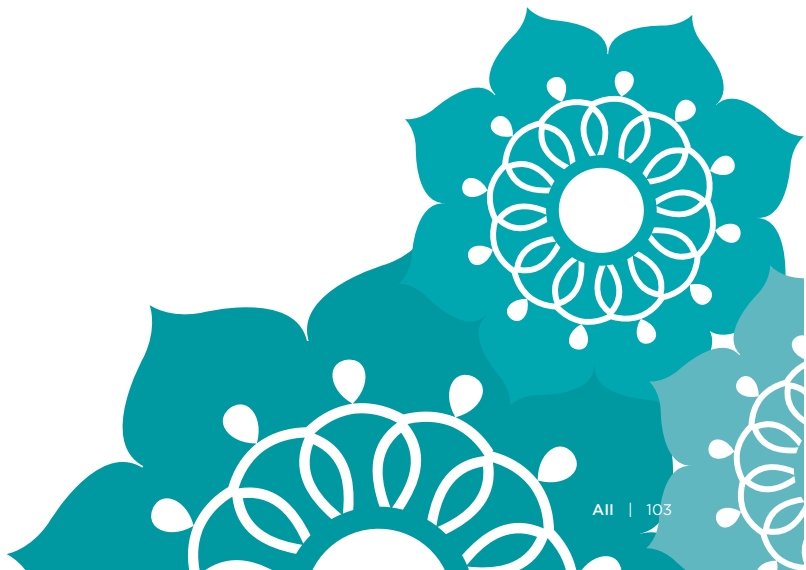
Context: During structured peer review using 'warm-cool-next step' feedback

Teacher actions:

- Gives students a simple peer review structure by stating the following.
 - » "When you review someone else's work, use these three steps. They help you give feedback that is helpful."
- 1. **Warm feedback: What is working well?**
 - › Say something positive about the work
 - › Focus on something they did clearly or effectively
- 2. **Cool feedback: What is confusing or needs improvement?**
 - › Say what is unclear, missing or could be stronger
 - › Keep it respectful and specific
- 3. **Next step: What should they do next to improve?**
 - › Give one clear action they can take to get to the next level in the rubric (e.g from Competent to Proficient)
 - › Make sure you link it the rubric
- Models how to give respectful, useful feedback.
 - » **Warm:** "Your image showing the café's outdoor seating facilities is really clear and matches the task."
 - » **Cool:** "Some of your menu labels are hard to understand."
 - » **Next Step:** "To reach Competent, update your labels so that they match the user-needs task directly."

How this moves learning forward:

- Students learn from each other.
- Feedback becomes collaborative rather than teacher-controlled.





4.5. STRATEGIES TO GAIN SUPPORT OF SCHOOL LEADERS

HOW LEADERS CAN SUPPORT YOUR ASSESSMENT PRACTICES:

- **Provide you with continuous professional development.**
 - » Provide you with teaching relief and financial support to attend workshops, conferences and coaching on authentic assessment strategies, formative assessment, rubrics and feedback methods.
 - » Facilitate you to join a professional learning community where you have opportunities to share assessment tasks, successes and challenges with your peers.
 - » Bring in experts or organise visits to other schools successfully using authentic assessments for formative assessment purposes.
 - » Build your connections to local workplaces and/or community groups through accessing the school's networks (e.g., families, alumni, sponsors).
- **Allocate time and resources.**
 - » Ensure planning time is built into your teaching timetable so you can collaborate with others on task design.
 - » Provide you with access to technology and materials required to simulate the conditions of the real world (e.g., lab equipment, software, industry tools).
 - » Provide support to redesign the school's Learning and Management System to have a space to monitor your formative assessment practices and outcomes over time (and to measure your students' growth).
- **Model a culture of assessment for and as learning (as opposed to testing).**
 - » Encourage a growth mindset around assessment, emphasising progress in learning and competency development rather than simply grades.
 - » Recognise and celebrate innovative assessment practices in staff meetings and school newsletters.
 - » Promote reflective, evidence-driven decision making to drive teaching, learning and assessment (e.g., supporting teachers to analyse student outcomes and use data to differentiate teaching and evaluate the impact of their own teaching on student learning).

BACKGROUND NOTES

WHAT ARE AUTHENTIC ASSESSMENTS?

Authentic assessments provide opportunities for students to demonstrate their learning by applying their knowledge and skills to meaningful, real-life tasks that align to the intended learning outcomes of the curriculum. They require students to solve problems, create products, and/or perform activities that resemble situations that they may encounter outside the classroom (Villarroel et al., 2020).

By getting students to complete assessment activities that resemble real-life situations, students are able to draw on a range of knowledge and skills to demonstrate where they are at in their learning, and what they need to do next to continually progress in their learning. Thus, authentic assessments can serve a formative purpose as well as summative.

Examples of authentic assessment tasks:

Examples of authentic assessment tasks that can be used in school settings include, but are not limited to:

- portfolios of students' work (e.g. a visual arts design subject);
- case studies (e.g. applying law concepts to a legal case);
- oral presentations (e.g. presenting research findings to peers in a chemistry subject);
- oral debates (e.g. debating teams focusing on a human rights issue within a humanities subject);
- creating a tangible product (e.g. a business plan in a business management subject or a culinary dish in a hospitality class).

Assessment tasks should be viewed along a continuum of authenticity. Even a traditional closed-book exam paper can incorporate elements of authenticity. This can be achieved by including open-ended, scenario-based items that reflect real-world events, requiring students to apply knowledge and higher order thinking skills when responding to each item on the exam.

HOW DO I DESIGN AUTHENTIC ASSESSMENT TASKS?

ASSESS BEYOND KNOWLEDGE

Aim to move beyond tasks that merely assess knowledge recall. The goal is to create opportunities for your students to demonstrate all aspects of their learning, including their higher order thinking skills. Accordingly, design assessment tasks that measure '*know how*' and '*know why*' rather than focusing solely on '*know what*'. For example, instead of relying on multiple-choice or short-answer items to assess students' understanding of workplace health and safety, you could ask your students to complete a simulated workplace risk assessment project. This approach enables you to assess their knowledge alongside critical thinking and communication skills. For instance, you might ask your students to:

- A. Identify potential hazards in a familiar workplace setting (e.g., a slippery floor in a hairdressing salon);
- B. Prepare a detailed risk assessment report; and
- C. Present their findings to peers for review and feedback.

It has elements of authenticity built into it as it:

- Mirrors real workplace health and safety responsibilities;
- Requires the use of industry templates and terminology; and
- Encourages collaboration and communication.

DESIGN REALISTIC TASKS

Think about what students are likely to encounter in real-world settings when applying the intended learning outcomes of your subject outside of the classroom. Consider the kinds of conditions they may face and the resources they would have access to. Try to incorporate these elements into the design of your assessment tasks to make them more authentic and relevant.

You might find it helpful to discuss your ideas with teaching peers or industry colleagues to brainstorm assessment activities that align to the curriculum and reflect real-world applications. You should also seek ideas from your students about their interests, values and aspirations. Try to accommodate their interests in the design of your task (see resource 4.1).

Some teachers are now using Generative AI tools to help draft task elements such as scenarios, case studies, inquiry questions, hands-on problem-solving activities or creative design briefs. These can be adapted to suit different year levels, student interests and subject areas. Remember, though, to always apply your professional judgement to review the quality and appropriateness of Gen AI creations for your students and subject area.

WHAT ARE RUBRICS?

Rubrics help both teachers and students understand how learning will be judged and what quality performance looks like. They can be designed in two main ways:

- **Task-specific rubrics** focus on particular parts of a task you have designed. For example, in Psychology, this might include the quality of the introduction or the accuracy of the results section in a 'lab report'. In Business Studies, it could describe the structure of a 'business proposal', the clarity of the argument, or the use of evidence from the text.
- **Outcome-based rubrics** are linked directly to the intended learning outcomes in the curriculum (or the learning goals/success criteria for a lesson). These rubrics assess what students have learned and can demonstrate, no matter how they choose to show that learning. For example, in a math class, students might show their understanding of problem-solving through a written explanation, a presentation, or even a digital model. The rubric stays the same because it focuses on the learning outcome, not the task format.

Both types of rubrics can be used for summative and/or formative assessment purposes. Each has its own strengths and challenges. A task-specific rubric clearly tells students what is expected for a particular project and shows how their work will be evaluated at different levels of proficiency. This is especially useful for summative assessments, where accuracy and fairness are very important. However, the downside is that a new rubric must be created for each unique task, which can take extra time and effort. During the development stage, the key components of the task must also be mapped back to the intended learning outcomes of the curriculum to ensure that the rubric adequately represents the specific skills and knowledge that underpin the task.

The second type, an outcomes-based rubric, focuses on broader skills or learning goals rather than one specific task. This approach offers more flexibility for both teachers and students in how learning evidence is collected and demonstrated. The trade-off is that it gives less detailed guidance on what students should do or how they should present their work to show their learning effectively.

No matter which type of rubric teachers choose to use, it's important that both are based on clear assessment criteria (i.e., criterion referencing) rather than comparisons between students (i.e., norm referencing). The pioneer of criterion referencing, Robert Glaser (1980, p.935) argued that criterion referencing is ".....the development of procedures whereby assessments of proficiency could be referred to stages along progressions of increasing competence".

See resource 4.3 for an example of an outcomes-based developmental rubric and resource 4.2 on creating and evaluating developmental rubrics.

WHAT IS FORMATIVE ASSESSMENT?

Formative assessment occurs when teachers, students and peers use evidence of learning to guide the next steps in instruction (Wiliam, 2011). To do this effectively, teachers need to understand how students typically progress in their learning so they can set clear learning goals and success criteria, as well as create a developmental scoring rubric to measure students' growth (see Part 2).

By gathering and interpreting evidence against a developmental rubric, teachers can adjust instruction and provide targeted feedback and scaffolding that supports students within their Zone of Proximal Development (Vygotsky, 1978). This can help students refine their learning strategies and regulate their own learning. The process is circular and should continue until the learning gap is closed (Heritage, 2010).

Research has shown that assessment can be most informative when:

- Evidence is elicited and interpreted within a *criterion referenced framework*, where teachers have a thorough understanding of students' typical learning progression within the disciplinary area. According to Heritage (2010), without a clear understanding of how learning progresses over time, teachers cannot effectively identify what students should aim for next (i.e., learning goals) or what meeting these goals looks like (i.e., success criteria);
- *Timely, constructive and directive feedback* has been provided about where students are at in their learning, and what they need to do next to continue to progress in their learning;
- It is part of the ongoing teaching-learning cycle (i.e., *embedded in instruction*) as opposed to an end point measure;
- Students take agency for their own learning by setting their own goals, monitoring their progress and adjusting their thinking, motivation and actions to stay on track with their learning (i.e., commonly referred to as '*self-regulated learning*').

See resources 4.4.1 and 4.4.2.

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Black, P., & Wiliam, D. (2009). Developing the theory of formative assessment. *Educational Assessment, Evaluation and Accountability*, 21(1), 5–31. <https://doi.org/10.1007/s11092-008-9068-5>

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Selvaraj, A., et al. (2021). Teachers' feedback practice and students' academic achievement: a systematic literature review. *International Journal of Learning, Teaching and Educational Research* 20: 308–322.

Villarroel, V., et al. (2020). Using principles of authentic assessment to redesign written examinations and tests. *Innovations in Education and Teaching International* 57(1): 38–49.

Vygotsky, L.S., (1978). *Mind in Society: The development of higher psychological processes*. Harvard University Press.

Wiliam, Dylan. (2010). The role of formative assessment in effective learning environments. In *The Nature of Learning: using research To inspire practice*. OECD. 10.1787/9789264086487-8-en.

ADDITIONAL RESOURCE LINKS

Assessment design (rubrics)

Charles Sturt University (2015). Rubrics and Marking criteria: Rules for writing quality. <https://reliablerubrics.com/2015/02/09/rules-for-writing-quality-criteria/>

- Guide to writing assessment rubric criteria and what to avoid

NSW Department of Education (2025). Explicit teaching strategy: Developmental rubrics. <https://education.nsw.gov.au/content/dam/main-education/documents/teaching-and-learning/curriculum/explicit-teaching/explicit-teaching-technique-guide-lisc-developmental-rubrics.pdf>

- Provides useful guidance on language use in rubric development and on classroom application.

Kalsi, Dr N.S.K. et al (2023). A roadmap to competency based assessment: PARAKH. Ministry of Education. https://www.education.gov.in/sites/upload_files/mhrd/files/nep/TS16_3.pdf

- Overview of frameworks and agencies implementing competency-based education and assessment in India. Includes a list of 12 assessment types, competency based assessment methodology in 8 steps, and a roadmap CBA development.

Thompson, Marie D. (2009). *Guide for (Re)Designing 'Fit-For-Purpose' Assessment Tasks*, James Cook University. https://www.jcu.edu.au/edqs/documents/jcu_086167.pdf

- Outlines authentic assessment principles and provides templates for designing assessments. Adapted from the work of Dr Kerri-Lee Harris (2005) and Phil Race (2007) (see <http://phil-race.co.uk>)

TVET Australia National Quality Council (2009). Guide for developing assessment tools. <https://harrisontraininggroup.com.au/wp-content/uploads/2016/08/Guide-for-Developing-Assessment-Tools.pdf>

- Guidance on planning authentic assessments. Designed for university faculty but could be applied in a senior secondary setting.

University of Melbourne (2025). Teaching and Learning Innovation resource: Assessment rubrics. <https://www.unimelb.edu.au/tli/learning-design-and-assessment/assessment-and-feedback/assessment-rubrics>

- Succinct overview of the what, why and how of assessment rubrics.

University of Queensland (c.2021). Teaching Guidance. Authentic assessment. <https://itali.uq.edu.au/teaching-guidance/assessment/designing-assessment/authentic-assessment>

- Outlines ideas and approaches to support designing and implementing authentic assessment.

University of Queensland (c.2010). Teaching Guidance. Creating and Using Rubrics. <https://itali.uq.edu.au/teaching-guidance/assessment/creating-and-using-rubrics>

- Guide and examples for creating assessment rubrics across students' developmental stages.

University of Massachusetts Amherst (c.2017). Center for Teaching and Learning resource: How do I design authentic assessments? <https://www.umass.edu/ctl/how-do-i-design-authentic-assessments>

- Overview of useful approaches to creating authentic assessment tasks with links to related resources in curriculum design and pedagogy.

Victorian Curriculum and Assessment Authority (VCAA) (2019). Applied Learning Self Checklist. <https://www.vcaa.vic.edu.au/sites/default/files/Documents/vce/AppliedLearningChecklist.docx>

- A useful tool to help teachers evaluate their applied learning practice across five pillars of Applied Learning. Checklist is a Word document download.

Victorian Curriculum and Assessment Authority (VCAA). (n.d.) Guide to formative assessment rubrics. <https://www.vcaa.vic.edu.au/assessment/foundation-10/formative-assessment/guide-formative-assessment-rubrics>

- Offers detailed and practical guidance and tools, including video resources, for designing formative assessment rubrics and putting the into practice. Organised around three stages of planning, assessing and reviewing, and adaptable to different educational settings.

Feedback

Australian Institute for Teaching and School Leadership (AITSL). Improve Practice - Feedback. <https://www.aitsl.edu.au/teach/improve-practice/feedback>

- Outlines evidence for value of feedback and offers case studies and downloadable tools for implementation of high-quality feedback on and for student learning.

NSW Department of Education (2025). Teachers Standards and Accreditation - Feedback practices and strategies. <https://education.nsw.gov.au/teaching-and-learning/professional-learning/teacher-quality-and-accreditation/strong-start-great-teachers/refining-practice/feedback-to-students/feedback-practices-and-strategies>

- Provides examples of feedback prompts and strategies that can be built into reflection activities.

Teacher self-assessment

Central Board of Secondary Education (n.d.). Teachers' Competency Self-Evaluation Framework. <https://www.cbse.gov.in/cbsenew/documents//Teachers%20Competency%20Self%20Evaluation%20Final.pdf>

- A self-assessment tool for teachers covering 18 areas of competence designed with a strong orientation towards experiential pedagogy. For Assessment strategies, see part VII (p.7) for 13 self-evaluation questions.

National Council of Educational Research and Training (NCERT) (2019). Guidelines and rubrics: Teacher's Self Assessment. <https://ncert.nic.in/pdf/announcement/TSAR.pdf>

- A self-assessment tool for teachers engaging in reflective practice as part of their CPD. Designed to help identify 'areas of strength and challenges when they perform their duties as a teacher and facilitate them to enrich the teaching-learning process'.


To cite this Toolkit: Garner, A., Dubey, M., Leahy, M., Gillis, S., Harinandini, H., Sharma, R., & Sarangapani, P. (2026). Tools for Applied Learning in Secondary Schools. Melbourne: Australia India Institute.



5 GROWING NEW PARTNERSHIPS FOR APPLIED LEARNING

Applied learning grows stronger when schools work with others. No single school can provide every resource, every expert, or every real-world learning opportunity on its own. Partnerships across education systems, communities, industry and global networks help teachers create richer, more authentic learning experiences for students.

Resources include:

- 5.1. Scoping collaborative pilot initiatives in applied learning between Indian and Australian schools
 - 5.2. Collaborative pilot initiatives for digital teacher training
 - 5.3. Community and partnership building: digital resources guide
- 



5.1. SCOPING COLLABORATIVE PILOT INITIATIVES IN APPLIED LEARNING BETWEEN AUSTRALIAN AND INDIAN SCHOOLS

Overall objective: Integrating applied learning into Indian school curriculum, teaching and learning.

A sample partnership building process could look like:

PREPARE

1. Determine your school's applied learning continuous professional development (CPD) goals with relevant teachers and leadership team

2. Identify a potential partner school with relevant or complementary experience for collaboration

Organisations that can help:

India: [National Skills Network](#), [Lend A Hand India](#), [UNICEF India](#), [Centre for Excellence in Teacher Education](#), [TISS](#), [Quest Alliance](#), [Sambhav Foundation](#), [Association of Indian Principals](#)

Australia: [Vocational and Applied Learning Association \(VALA\)](#), [Asia Education Foundation](#), [Australian Teacher Education Association](#)

3. Research potential partner schools' applied learning practice or experience

4. Prepare an outline of your local context, education setting, CPD focus and partnership goals

5. Identify and invite CPD project team members to participate in next stages



INITIATE

6. Write to principal (or CPD lead) of the potential partner school with a request to discuss a possible pilot collaboration

Tips:

- allow long lead time for preparation stage
- only approach one school at a time
- consider different academic years and school holiday closures

If/when a potential partner shows interest:

7. Schedule meeting to discuss collaborative possibilities

8. Initial conversation with proposed partners can focus on:

- Potential area of collaboration, e.g., curriculum adaptation within existing frameworks, applied learning pedagogy, interdisciplinary planning, authentic assessment design and implementation
- Priorities and constraints: Share curriculum priorities and any practical constraints such as schedules, assessment timelines and requirements, policy frameworks, school calendars, and communication or technology considerations



IMPLEMENT

Pilot project stage 1:

9. Initial meeting: Partners share information on local context, applied learning capabilities and needs

Decide on the area(s) of collaboration, e.g.:

- *Integration of skill-based curriculum:* develop real world learning content with hands-on exposure that prepares students for the world of work
- *Industry participation and sponsorship:* explore industry partnerships to sponsor the programs and integrate short-term internships
- *Develop localised curriculum:* support practical tasks and mini projects with input from local micro, small and medium enterprises and community organisations
- *Student agency:* build learner engagement and autonomy by ensuring relevance of resources and learning experiences to students' interests and aspirations
- *Teacher preparation:* orient towards innovative applied learning practices suitable for Indian classrooms

10. Co-design project

This will take time to ensure project design meets the needs and goals of both partners

11. Check against relevant guidelines, policies

Consider curriculum and assessment frameworks, teacher CPD requirements, work health and safety, industry-specific regulations, etc.

12. Map out realistic timeline for preparation and implementation stages.

Consult with school timetabler, subject and year level coordinators in both schools

13. Gain feedback on full draft of project and timeline from participating or concerned teachers, leaders, administration, community members and other stakeholders

Pilot project stage 2:

14. Prepare detailed plan for implementation and monitoring

15. Seek approval from relevant authorities (local, regional, state, national, industry etc)

16. Schedule project meetings to track progress and deal with issues arising

17. Roll out project!



EVALUATE

18. Maintain records of project milestones, meetings, feedback

19. Schedule meetings with partners to share and analyse progress and outcomes

20. Compile feedback and suggested improvements

21. Prepare annual reports on process, experience, outcomes and recommendations

22. Share experiences with other schools in network

CASE STUDY: A SCHOOL-TO-SCHOOL APPLIED LEARNING PARTNERSHIP TAILORED TO LOCAL CONTEXTS (AUSTRALIA)

In 2020, Camberwell High School, Melbourne, Victoria took up the opportunity to participate in the “Skilling Australia” initiative. This was a national commitment to deliver applied training programs, apprenticeships and work placements to senior secondary students in cybersecurity. They partnered with Joseph Banks Secondary College in Perth, Western Australia to form a sister school relationship to share resources and learning experiences for enriching student outcomes. Each school formed partnerships with tertiary and industry organisations so that students could access broader learning experiences and work placements.

During the five years since the inception of this initiative, both schools have offered applied learning opportunities in cybersecurity for two different contexts. Camberwell High School caters mainly to students who have tertiary aspirations in cybersecurity while Joseph Banks Secondary College engages with a partner to deliver a Certificate III Information Technology (Cyber Security) over Year 11 and 12, and students graduate with a qualification prior to their selected post school pathway.

Both secondary schools have collaborated by competing against each other in online capture the flag competitions, sharing virtual lessons via video conferencing and hosting sister school visits across the Australian continent. But they have differed in some aspects of their respective curriculum offerings:

- Camberwell High School year 10 class of students aged between 15-16 years were mentored by professionals in cybersecurity from their tertiary and industry partnerships to research and write a mini-thesis on a chosen inquiry on cybersecurity. Topics included Nuclear cyber vulnerabilities and How AI is re-writing the rules in cryptography.
- Joseph Banks Secondary College offers the Cyber Solutions course with access to electives such as Coding, Robotics, Augmented Reality Game and Web design. Through their industry mentoring, students have access to work experience and collaborated on initiatives such as the opportunity to present at the AISA CyberCon conference (most recently in October 2025).

While catering to the needs of their particular school community, the two schools share the common ideal of offering their students vocational pathway options in cybersecurity. Both schools actively support and value applied learning opportunities.



Students collaborate at a Science Gallery workshop in Melbourne.
Image: Camberwell High School



5.2. COLLABORATIVE PILOT INITIATIVES FOR DIGITAL TEACHER TRAINING

VOCATIONAL AND APPLIED LEARNING ASSOCIATION (VALA) & LEND A HAND INDIA (LAHI)

DEVELOPING A DIGITAL COMMUNITY OF PRACTICE FOR TEACHERS IN APPLIED LEARNING

Context

The Vocational and Applied Learning Association (VALA) is the peak professional body in Australia representing vocational and applied learning educators. VALA supports thousands of applied learning teachers and leaders across secondary and vocational education through professional development, events, advocacy and peer-to-peer networks. It has significant experience in building educator capability, sharing practice-based resources, and fostering innovation and networks in applied learning.

Lend A Hand India (LAHI) is a major Indian non-profit working at the intersection of school education and vocational skill development. LAHI currently partners with state governments and schools to embed applied and vocational learning across thousands of schools in India – reaching an estimated 20,000+ schools. They are engaged in implementing government partnerships affecting 2 million students nationwide.

LAHI's programs include initiatives such as Project Catalyst which is the project management unit (PMU) model working closely with state governments and supporting them to implement vocational education in schools, as part of school curriculum. Another flagship initiative facilitates high school students' internships with local employers to gain employability skills and world of work exposure. LAHI's Project Saad focuses on enhancing employability, interpersonal and transferable skills through structured learning experiences and teacher support.

Both VALA and LAHI recognise the role of technology in enabling transformative continuous professional development (CPD) for teachers and improving applied learning outcomes at scale.

Common Ground

1. Digital models of teacher training

VALA and LAHI are united in exploring digital and blended models for teacher professional development that:

- » Support ongoing, distributed learning for educators across geographically dispersed schools.
- » Build scalable online communities of practice that go beyond one-off workshops to sustain engagement.
- » Leverage technology to share resources, examples of practice, and contextualised professional development modules.

VALA currently runs online CPD programs for teachers on applied learning pedagogy, community-based project design, assessment and more. Based on core principles of applied learning, the workshops are designed to support teachers to build projects connected to their students' local community contexts, personal interests and aspirations. These CPD experiences have the potential to be adapted to Indian schools and their context-specific applied learning goals.

LAHI is currently designing online training modules for teachers, developing recorded digital CPD content for self-paced learning and a Coding curriculum for teacher professional development in digital skills.

2. Extensive school networks

Both VALA and LAHI are connected to a strong and diverse network of partner schools that provides a strategic advantage for piloting, iterating and scaling digital teacher PD models. VALA's established network in Australia brings deep insights into educator support models and best practices, while LAHI's extensive reach across thousands of Indian schools offers a unique opportunity to co-develop digital PD that can be adapted across a variety of contexts.

Partnership Approach

Initial alignment activities

1. Joint workshops to share each organisation's current work in teacher professional development and digital learning strategies.
2. Comparative mapping of current digital CPD models and platforms used in Australia and India.

Collaborative Co-Design

1. Joint needs analysis: Co-design metrics for identifying gaps in current teacher CPD and school implementation capacities in the Indian context, through extensive consultations with local schools and teachers.
2. Draft a digital CPD strategy: VALA contributes evidence-based CPD frameworks, models, templates and assessment rubrics; LAHI contextualises these for Indian school settings and secures buy-in from Indian state government education departments.
3. Build a digital community of practice (CoP) hub: A shared online platform that connects educators across networks, facilitates asynchronous learning and showcases teacher-generated resources.

Pilot Implementation

1. Launch short, blended online courses for Indian teachers on the CoP hub focused on:
 - » Applied learning pedagogy and curriculum design
 - » Authentic assessment tasks and principles
 - » Development of transferable skills through work-based learning
2. Create a shared repository of CPD activities, case studies and multimedia resources – drawing on VALA's examples from Australian schools and LAHI's implementation insights from Indian schools.

Sustained outreach and lesson-sharing

1. VALA and LAHI leverage their existing connection with the National Skills Network (NSN) to promote the digital teacher CPD courses to the wider Indian school ecosystem.
2. Co-develop a monitoring and evaluation plan to track the uptake of the digital courses and enable continuous reflection and improvement.

Intended Outcomes

- Strengthened teacher capability in applied learning, grounded in global best practice and adapted to local school realities.
- Digital CPD pathways that make high-quality professional learning accessible across diverse and resource-varied school settings.
- A reference library of contextualised applied learning units and CPD modules for use in both countries.
- A sustainable Australia-India CPD ecosystem with ongoing exchange, shared resources and expanded digital collaboration.

CASE STUDY: VOCATIONAL AND APPLIED LEARNING ASSOCIATION (VALA) ONLINE PROFESSIONAL DEVELOPMENT WEBINAR SERIES

This online CPD, which takes place over three online sessions, was originally designed for teachers of the Victorian Vocational Major and Victorian Pathways Certificate. The model could however be adjusted for applied learning initiatives within different curriculum and assessment frameworks.

There is also strong potential for this CPD series to be adapted to support transnational collaborations and communities of practice.

This online CPD is designed to support teachers to:

- implement applied learning successfully in the classroom.
- come away with new ideas and enthusiasm that can be used to engage their students, school and community.

The webinars demonstrate how teachers can:

- collaborate with students to develop projects aligned to their particular community, context and cohort
- use teaching and learning strategies supported by core theories underpinning applied learning
- integrate across different subjects / areas of study, and
- apply multiple assessment approaches.

The session leaders share examples of successful community projects. They also provide resources and time for participants to collaborate with colleagues.

Pre and post 'homework' is designed to help participants develop an applied learning project using the information from the sessions.

Session 1 – Community, Context and Cohort

- Understand your school's community, context and your student cohort.
- Identify and discuss how your and your students' passions, interests and skills can be used to engage students in community projects.
- Consider socio-cultural characteristics, community, parents/carers, industries and trades in your community, likely employment, historical background of school.

Participants share experiences of developing community projects, reflecting on what worked and didn't work.

Session 2 – Learning theories and teaching and learning strategies

- Explore relevant learning theories including experiential learning, constructivism, adult learning theory and communities of practice.
- Unpack strategies including group work, reflective journaling, work integrated learning and community partnerships.
- Explore how these learning theories and strategies can be incorporated into projects through teaching and learning activities.

Session 3 – Integration of the studies and assessments

- Explore how state-mandated curriculum framework and studies can be integrated into a project, using examples.
- Collaborate and develop ideas for integration across subjects/studies.
- Examine assessment approaches in applied learning linked to the mandated curriculum.
- Discuss examples of assessment that show how key knowledge and skills can be met across study designs.

By the end of the workshop, participants will have:

- developed an integrated applied learning project, including assessment tasks, with relevance to their own setting and student cohort,
- made new professional connections supporting future collaborations and knowledge sharing, and
- gained the tools needed to build an online Community of Practice related to applied learning practice.



SCENARIO: POTENTIAL COLLABORATION BETWEEN DPS SCHOOLS (INDIA) AND WYNDHAM TECH SCHOOL (AUSTRALIA)

Co-designing real-world, technology-enabled learning experiences

Two Delhi Public Schools (DPS) in India explore integration of more hands-on, future-skills-oriented learning into their middle and secondary grades. Wyndham Tech School in Australia offers strong expertise in immersive technologies, design challenges, maker spaces, robotics, and industry-integrated problem-solving projects. A collaborative program between the institutions can strengthen applied learning at school level.

Key needs and challenges

- DPS school leadership and teachers require support in project-based and interdisciplinary design, especially in STEM and emerging technologies
- Students need greater exposure to real-world problem-solving, beyond textbook-driven tasks
- Schools want access to tech-enabled learning experiences (AR/VR, design thinking, prototyping)
- Both Indian and Australian partners need alignment of schedules, curriculum demands, and assessment systems
- Both partners will benefit from a structured way to link student projects to real industry problems

Proposed partnership approach

The school leaders initiate discussions using the partnership pathway outlined in the Toolkit. Together, they design a structured collaboration:

- 1. Joint identification of focus themes through leadership deliberations:**
Examples: climate solutions, digital fabrication, smart cities, cyber safety, sustainable energy
- 2. Teacher-to-teacher collaboration sessions:** Wyndham's teachers conduct virtual workshops on design thinking, making, tech integration, and AL assessment. DPS teachers share syllabus constraints and local relevance needs
- 3. Co-design of student projects:** Mixed teams develop 4- to 6-week project aligned with CBSE and Victorian curriculum expectations:
 - » Problem framing
 - » Research tasks
 - » Prototyping
 - » Reflection and presentation
- 4. Pilot virtual maker-space experiences:** Wyndham Tech hosts remote sessions using AR/VR walkthroughs, simulation tools, and prototyping demonstrations adapted for Indian classroom settings
- 5. Student collaboration and showcases:** Students from both countries present solutions, receive feedback from industry mentors, and document learning through rubrics
- 6. Review and scale-up:** Both schools evaluate impact, refine processes, and explore expansion to multiple DPS branches or government schools

Intended outcomes

- Improved teacher confidence in designing and assessing applied learning projects
- Increased student engagement and real-world exposure through shared projects
- Access to advanced technology and maker-space methodologies
- A sustainable India-Australia school collaboration model that can be replicated by other schools



5.3. COMMUNITY AND PARTNERSHIP BUILDING: DIGITAL RESOURCES GUIDE

This guide brings together a curated selection of digital tools and resources that support teachers in building strong school-community partnerships for applied learning.

Ecosystem Resources

- **Sikshana Parent App** Sikshana Foundation – Enables teachers to engage with parents and get them to participate in their child's learning activities in school and at home. sikshana.org/Products/Technology/
- **Content Kits** India Literacy Project – Provides state-specific best practice guides, classroom and teacher professional development materials. www.ilpnet.org/download/
- **School Improvement Tool** Australian Council for Educational Research – A tool for classroom observation with multiple domains and sub-domains that include communication and demeanour, learner involvement and engagement, setting expectations and preparedness, subject knowledge and teaching strategies, classroom management, and closure. www.acer.org/au/research/school-improvement-tool

Curriculum Resources

- **National Initiative for School Heads' and Teachers' Holistic Advancement (NISHTHA)** – Offers integrated training programs that support NEP 2020's Continuous Professional Development goals. itpd.ncert.gov.in/
- **Digital Infrastructure for Knowledge Sharing (DIKSHA)** – A national platform hosting open educational resources adaptable for applied learning contexts. diksha.gov.in/about/
- **Twinkl** – A paid subscription offering a library of downloadable applied learning resources for teachers, parents and schools, including unit assessments, projects and interactive games. www.twinkl.co.in/about-us

Pedagogy Resources

- **Sikshanapedia App** Sikshana Foundation – Provides a wide range of educational content to empower rural education (specifically for members of Gram Panchayat Libraries). sikshanapedia.en.softonic.com/android
- **Teacher Instruction Kits** Vision Empower Trust – Offers guidelines for teachers to create accessible and experiential learning of concepts covered grade-wise in the curriculum for students with visual impairment. visionempowertrust.org/teacher-instruction-kit/

Assessment Resources

- **Sikshana OMR Solutions** Sikshana Foundation – Supports large-scale learning assessments across vast geographical areas. sikshana.org/Products/Technology/
- **Sikshanapedia App** Sikshana Foundation – Provides differentiated teaching strategies, lesson plans, and tailored assessment strategies for members of Gram Panchayat Libraries in various villages across Karnataka. sikshanapedia.en.softonic.com/android

BACKGROUND NOTES

GROWING NEW PARTNERSHIPS FOR APPLIED LEARNING

This section outlines the different kinds of partnerships available in Australia and India, key actors involved, and practical ways they can work together. It shows how schools can connect at multiple levels – from policy and peak bodies to universities, industry, civil society and other schools – to build sustainable, future-focused applied learning programs.

SCHOOL-TO-SCHOOL PARTNERSHIPS

ACTORS

- **Australia:** Public (government), Catholic and independent secondary and senior secondary schools; Tech Schools
- **India:** Government schools; Kendriya Vidyalayas (Central Schools); Jawahar Navodaya Vidyalayas (National Residential Schools); private schools; Atal Tinkering Labs (ATL) school networks

AREAS OF SYNERGY

1. Create structured sister-school partnerships

- » Modelled on Australian cluster arrangements, where schools co-deliver applied learning units.
- » Pair an Australian school with strong applied learning practice with an Indian school to design joint projects, share teaching plans and develop parallel assessment tasks.

2. Share specialist learning spaces and facilities

- » Victorian Tech Schools regularly host students from multiple schools to access industry-grade equipment (e.g., robotics, VR, fabrication labs).
- » This model can support Australia-India collaboration by enabling:
 - › virtual demonstrations of Tech School equipment for Indian partner schools
 - › access for Indian schools to curated learning modules developed with industry
- » joint design of low-cost, locally adaptable equivalents for Indian schools.

3. Co-design inquiry and industry-linked curriculum modules

- » Victorian Tech Schools co-develop curriculum with teachers, based on industry problems (e.g., in digital manufacturing, biotech, cybersecurity, sports science).
- » Indian ATL schools similarly design maker and innovation projects.
- » Schools in both countries can:
 - › co-author project briefs tied to real issues in each community
 - › use shared protocols for design thinking, prototyping and reflection
 - › collaborate on industry-aligned modules (e.g., cybersecurity, agri-tech, sustainability).

4. Share teacher professional development resources

- » Australian clusters regularly run joint CPD sessions where teachers observe model lessons, co-plan units and share assessment practices.
- » These practices can be transferred through:
 - › shared CPD workshops between Australian applied learning leaders and Indian educators
 - › online CPD short courses hosted by an Australian Tech School for Indian teachers
 - › joint teacher 'studio days' when teachers trial learning activities together

5. Teacher exchange or virtual team-teaching sessions

- » Australian and Indian teachers can:
 - › jointly deliver online lessons in shared units
 - › co-lead student workshops in ATL labs or Tech Schools
 - › run virtual 'lesson studies' to observe, refine and improve applied learning methods.

6. Develop shared resource banks and teaching tools

- » Australia's secondary schools and colleges produce publicly available curriculum units, videos and teacher guides.
- » Indian school bodies such as CBSE, NCERT and NCTE provide resources for teacher education in applied pedagogies and curriculum adaptation through a variety of platforms such as DIKSHA, NISHTHA.
- » Cross-country partnerships can merge these into:
 - › bilingual resource banks
 - › step-by-step project kits with local adaptations
 - › assessment rubrics tailored to both countries' (and states') curriculum frameworks (ACARA, Australian states' senior secondary certificates and CBSE/SCERT frameworks).

7. Launch cross-country innovation challenges

- » Inspired by Australian Tech School challenges (e.g., design sprints, hackathons).
- » Pairing Australian and Indian schools allows students to collaborate on real-world issues such as water management, energy, health technology or climate resilience.
- » Teachers can receive training together on how to mentor students through these challenges.

8. Build multi-school applied learning hubs

- » Australian schools frequently pool resources, sending students to centralised hubs (Tech Schools, TAFEs) for specialised experiences.
- » Indian networks can adapt this model by linking ATL labs, ITIs (Industrial Training Institutes) and State Skills Universities with schools.
- » Australian partners can support hub design, governance, safety protocols, and teacher capacity-building.

9. Create international Communities of Practice for teachers and school leaders

- » Use platforms supported by organisations like the AITSL and AERO, combined with TISS's and Azim Premji University's online teacher communities, to create:
 - › cross-country teacher forums
 - › school leader networks
 - › applied learning project exchanges.
- » Themes could include applied learning assessment and integrating industry or community partners into classroom learning.

TRAINING PROVIDERS AND SKILLS ORGANISATIONS

ACTORS

- **Australia:** Technical and Further Education (TAFE) providers; Tech Schools; secondary schools registered as training organisations (RTO) e.g., Northern College of the Arts and Technology (NCAT); Skills and Jobs Centres; Local Learning and Employment Networks (LLENs)
- **India:** Industrial Training Institutes (ITIs); National Skill Development Corporation (NSDC) training partners; State Skill Development Corporations; Sector Skill Councils, Indian Institute of Skills

AREAS OF SYNERGY

1. Co-design teacher professional development programs

- » Australian TAFEs and teacher training bodies can collaborate with Indian Skills Universities and schools to develop PD programs that incorporate industry-relevant projects, workplace skills, and applied learning pedagogy.

2. Deliver workshops and mentorship by industry-experienced trainers

- » Industry-experienced trainers from Australian TAFEs and teacher training centres can work with their counterparts in India or collaboratively with school teachers, in applying hands-on, work-integrated learning approaches and designing student projects that reflect local market needs.

3. Share curriculum, project templates, and assessment tools

- » Supply adaptable modules, competency-based rubrics, and project guides to support applied learning and teacher capability.
- » Teacher training bodies can supply ready-to-use or adaptable modules, competency-based rubrics, and project guides, helping Indian teachers integrate applied learning practices aligned with industry expectations.

4. Build professional communities of practice

- » Create ongoing networks where Indian teachers, TAFE trainers, and teacher education bodies exchange ideas, co-develop lessons, and share reflections on applied learning.

CIVIL SOCIETY AND INDUSTRY PARTNERSHIPS

ACTORS

- **Australia:** Australian Multicultural Business Alliance (AMBA); Australian Education Union (AEU); Tech School industry partners; cybersecurity firms; local manufacturing and technology companies
- **India:** Lend a Hand India; Sambhav Foundation; Quest Alliance; AMBA India; Tata Trusts; Azim Premji Foundation; Annual Status of Education Report (ASER); National Association of Software and Service Companies (NASSCOM); Federation of Indian Chambers of Commerce and Industry (FICCI); Confederation of Indian Industry (CII); regional technology start-ups; manufacturing clusters

AREAS OF SYNERGY

1. Leverage civil society as applied learning trainers and school partners

- » Indian civil society organisations (CSOs) such as Lend a Hand India, Quest Alliance, and Azim Premji Foundation have strong, long-standing partnerships with schools and act as training providers, delivering teacher professional development programs in applied learning, project-based pedagogy, and community-linked initiatives.
- » Australian education unions (e.g., AEU) and peak bodies can collaborate with these organisations to co-deliver PD, share teacher resources, and adapt applied learning programs for diverse school contexts.

2. Co-create applied learning modules and real-world projects

- » Jointly design modules that connect classroom learning to community or industry needs, including gender-inclusive STEM, vocational pathways, and social impact projects.
- » CSOs provide contextual insights from local schools, while Australian partners contribute expertise in curriculum design, pedagogy, and assessment.
- » Local industry and workplaces can contribute to project design by identifying real-world challenges, providing mentorship, and offering workplace-based learning opportunities.

3. Mentoring, work immersion, and cross-country teacher networks

- » Deliver mentoring and facilitation programs for teachers and students, including virtual or in-person work immersion experiences.
- » Build cross-country Communities of Practice where teachers from Australia and India exchange applied learning strategies, co-develop lesson plans, and share experiences from low-resource and diverse school environments.
- » Workplaces and local industry partners can host teachers for short-term immersion to understand skill demands, applied learning methods, and workplace problem-solving approaches.

4. Industry collaboration and innovation initiatives

- » Co-design real-world industry challenges, innovation competitions, or hackathons for students.
- » Provide access to guest experts, simulators, emerging technologies, and industry tools to enrich learning.
- » Share models for linking schools with local industry, drawing on Indian CSO-school partnerships (e.g., Lend a Hand India) and Australian Tech School-industry engagement practices.
- » Encourage joint curriculum adaptation between schools, CSOs, and local industry to ensure applied learning projects are aligned with both educational and workplace skills needs.

To cite this Toolkit: Garner, A., Dubey, M., Leahy, M., Gillis, S., Harinandini, H., Sharma, R., & Sarangapani, P. (2026). Tools for Applied Learning in Secondary Schools. Melbourne: Australia India Institute.

GLOSSARY OF TERMS

Active Learning: Learning in which students actively participate through discussion, exploration, hands-on work, and reflection rather than passively receiving information.

Authentic Assessment Tasks: Assessment tasks in which students demonstrate their skills and knowledge in a real-world setting or a simulation that reflects real-world conditions and expectations.

Collaborative Learning: A method where students work together in pairs or groups to solve problems, complete tasks, or create products, building communication and teamwork skills.

Competency-Based Learning: A focus on what learners can demonstrate and apply rather than what they memorize, emphasizing skills, performance, and real-world tasks.

Experiential Learning: A learning approach where students learn by doing, applying knowledge in real or simulated situations and reflecting on their experiences to deepen understanding.

Flexible Learning: Designing learning experiences that adapt to different abilities, needs, and learning styles, ensuring all students can participate.

Generative Artificial Intelligence (Gen AI): Artificial intelligence systems that create new content based on existing data, in response to prompts.

Problem-Based Learning (PBL): A teaching approach where learning begins with a real-world problem, and students investigate, analyze, and propose solutions while gaining subject knowledge and skills.

Project-Based Learning (PBL): A structured approach where students work over time to create a product, prototype, or presentation in response to a complex question or challenge, integrating multiple skills and subjects.

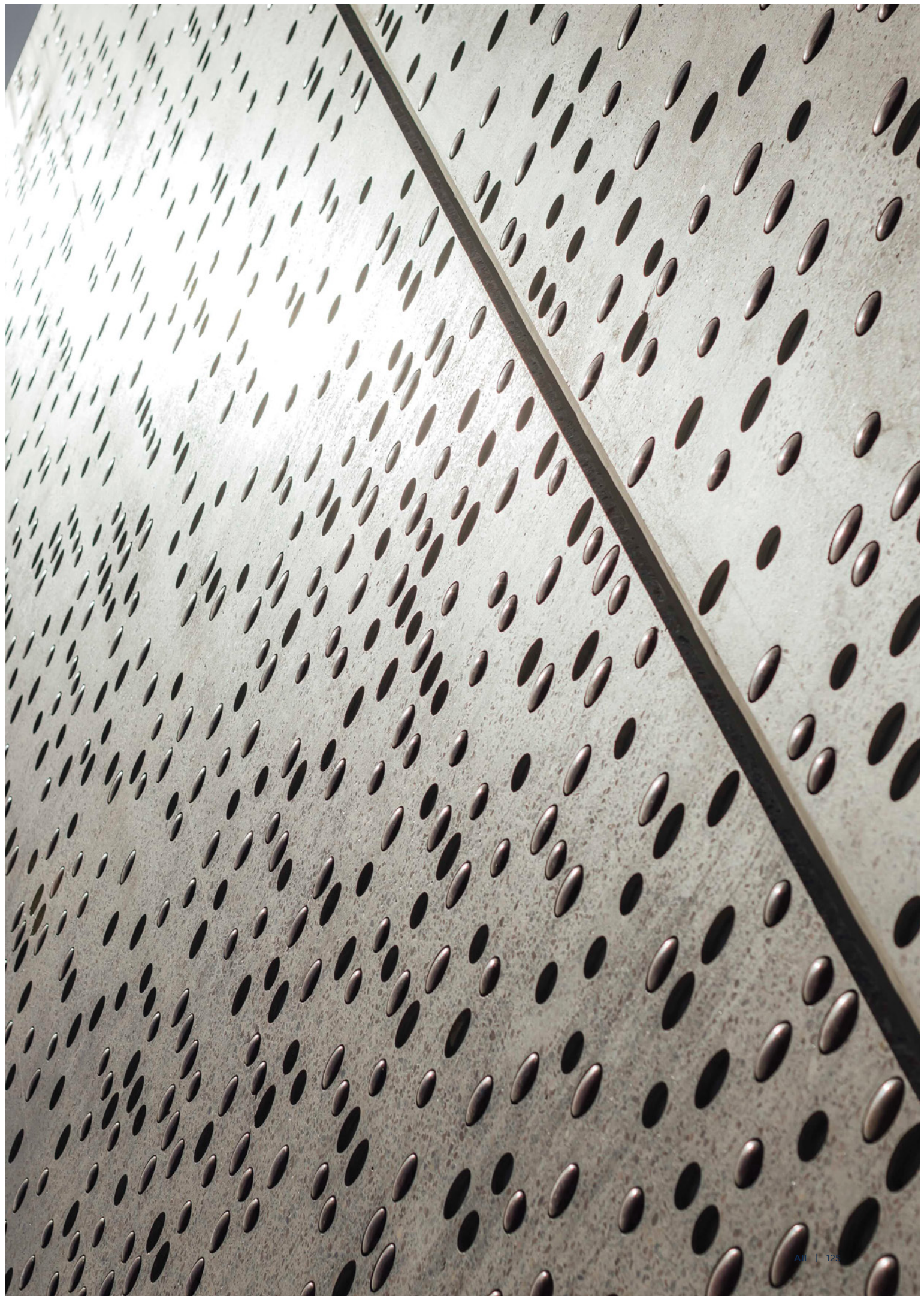
Student Agency: Students' ability to make choices, take ownership, and influence their own learning through decision-making and reflection.

Technical and Vocational Education and Training (TVET): A broader term that includes vocational education plus technical skills, workplace learning, industry partnerships, and competency-based training for diverse career pathways.

Vocational Education (VE): Education that focuses on developing practical skills and knowledge for specific occupations or trades, often linked to industry needs.

Vocational Education and Training (VET): A system that combines theory and hands-on training to prepare learners for work in various sectors, often leading to certifications aligned with job roles.







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