Principles for Learning Underpinning Innovative Learning Environments

Principle	How it looks in practice
1. Make learning central to teaching and rethink students' and teachers' roles A shift from teacher control and decision making over students' learning can support students to develop self-regulation and become independent and effective learners	• There is a focus on helping students come to understand themselves as learners, and on developing students' capacity and responsibility to determine and monitor their own learning. Students are skilled in self-regulation and equipped with the necessary strategies to further their own learning. • Teachers ensure each student is engaged. Greater engagement is enabled when schools address students' diverse needs, strengths, interests and aspirations. Curriculum is relevant and engaging, with students involved in defining/refining it. Power is shared, with teachers working together with students in knowledge-building endeavours that draw on the strengths and knowledge of all participants in order to best support learning. • Teachers benefit from continuous professional learning about how to focus their subject knowledge at the systems level so they can support students to learn in more open-ended knowledge-building ways. This might be aided by networks and collaboration that are focused around learning.
2. Make learning social and collaborative Learning requires interaction in which students try out and test ideas with others. When co-operative learning is done well and ensures learning for every member of the group (not just the most active ones), there can be positive effects. When students work together in collaborative, peer-tutoring and reciprocal teaching scenarios, deeper understanding of the material often results	• Well-organised co-operative learning with peers, teachers, community or online contacts/material is common. Inquiry, problem-solving and interdisciplinary project work demands more of students than just talking or sharing work within a group. Commitment to learning is maintained because, while social cohesion and affiliation can facilitate learning in task-oriented classes, social cohesion can inhibit students in classes with little or no task orientation from pursuing academic goals not shared by others in the class. • Sharp boundaries between groups, classes or projects are avoided. Teachers also benefit from working collaboratively. Learning spaces can be easily reconfigured for group work and ICT can be used to support learning exchanges. • Competitive environments are avoided because these environments have a negative impact on activities such as the sharing of knowledge and a focus on competitive outcomes detracts attention from the process of learning.

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3. Tune in to students' emotions and motivations Students' emotions and motivations are integral to learning success, as students learn better (and teachers are more effective) when they feel competent and experience positive emotions	• Teachers are highly attuned to motivations. Content is motivating and meaningful to students, which might be achieved by students' participation in planning, and through motivating approaches to learning such as peer-learning, technology-rich contexts and community engagement. • Students' emotional states are monitored and teachers seek to promote positive emotions while reducing negative ones. Sensitive formative feedback should be used to enhance students' feelings of achievement and self-efficacy. • Safe emotional environments are developed and students' exposure to stress is limited.
4. Personalise learning by co-constructing curriculum No two students learn in the same way, or bring the same prior knowledge to learning. Differences between students (in terms of abilities, competencies, motivations, emotions, linguistic, cultural and social backgrounds) and in their prior learning, significantly affect learning success. Students that have a voice in the what, why, where, how and with whom of their learning activities are found to have increased motivation for learning and sense of belonging or attachment to the class, as well as displaying greater achievement, higher order thinking and creativity	• Learning is personalised as teachers and students co-construct bespoke curricula in which learning is connected to and shaped by students' interests and contexts. Content and activities reflect the input and interests of students, as well as what teachers regard to be important knowledge/skills, rather than teachers retaining control over what is learned and how. Students have a role in and responsibility for designing learning from the ground up. Emphasis is on the rationale for student choices rather than evaluation of whether the choice is 'right' for the student. Continuous choices accompanied by assessment and feedback improve students' levels of agency and self-efficacy. • Personal and self-determined learning provides students with opportunities to create, plan, execute and assess the learning process themselves. In this way they learn goal setting, questioning techniques and how to vet content. Curriculum is seen as a strategy, tool or resource to be used when the student needs it, rather than something taught just in case it is needed in the future. Technology is used to move control of learning to the student, to individualise information, communication and materials, and to make assessment collaborative. • There is flexibility in pedagogies, practices, groupings, time and spaces with the different combinations available meeting different students' needs. Students feel free to learn in the way that suits them best without disturbing others. Flexible floor plans support varied teaching and learning approaches. • Personalisation can also be developed through authentic and meaningful real-world contexts, matching students' interests and aptitudes to the opportunities and issues within their own community.

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5. Ensure learning is demanding for each student High and appropriate expectations are correlated with higher student achievement	• Teachers have high expectations. Personalisation ensures that each student is stretched slightly above the limits of what they believe themselves to be capable rather than continuing with work that is too easy. • Students are supported to develop growth mindsets. Assessment is not focused on passing and failing, or on sorting students and identifying them for remedial attention, but on goal setting and optimising learning. • Overload is avoided.
6. Use formative assessment focused on competencies rather than knowledge When assessment is not in line with new learning goals but implicitly reflects traditional learning goals, traditional goals will strongly influence the process of learning	• Students are clear about what is to be learned and why, as well as how to know it has been learnt successfully. Expectations and achievement are made highly visible within a culture of self-assessment, self-evaluation and evidence-informed target-setting. • Assessment is sensitive to individual strengths and weaknesses, with an emphasis on formative use. • Assessment focuses on measures of deep mastery, understanding and capacity to use knowledge rather than pass/fail or right/wrong judgements. It might involve diagnostic tests for assessing social, cognitive and metacognitive learning skills, performance assessments in which students have to execute a task or solve a problem, or portfolios which demonstrate development.
7. Encourage horizontal connectedness across learning activities and subjects Problem-finding and solving, communicating and presenting ideas are important skills for the modern workforce	• Teachers seek interdisciplinary connections across different subjects through key concepts, and between school learning and learning that takes place outside of school. Projects and inquiries focus on helping students to integrate discrete objects of learning into larger frameworks in order to use learning to address unfamiliar, meaningful and engaging real-life problems that stretch across subject boundaries. Students might present their work to groups in the school community as part of face-to-face events or using online technologies as sharing work with a variety of audiences helps to deepen the learning process. • Home, community and the wider world are viewed as powerful potential sites for learning so a variety of sites for learning outside the classroom are utilised. Connections might be local or global, formal (initiatives that bring schools into clusters) or voluntary and non-formal (working with different community bodies). Communication technologies might be used as a platform for allowing these connections to flourish and enabling the sharing of information and collaboration. • Schools constantly endeavour to work with families and communities, schools, universities, cultural institutions and businesses to shape learning and teaching, strategically choosing which partners will be able to influence pedagogical activities in line with the school's vision for learning, without being limited by embedded ideas or assumptions about what communities can offer.

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8. Teach for diversity Learning environments that support a variety of ways of learning are more inclusive. In addition, skills such as creativity, critical thinking and innovation can be supported if students are educated for the diversity of knowledge	• The capacity for diversity is built through an orientation to exploring connections and spaces between people, ideas and things (rather than the things themselves). Teachers and students work across and between current ideas, groups, people and knowledge systems, working with them to co-produce something new, rather than to transfer or assimilate knowledge from one to another. • High levels of connectedness with communities and others support educating for diversity. • All levels of the system are continuously learning and innovating, and deliberately adopting knowledge-building systems. There is a focus on supporting innovation over time.
9. Use knowledge to develop learning capacity A focus on doing things with knowledge, on creating and using new knowledge to solve problems and find solutions supports students to develop learning capacity. The deep learning that develops in problem-solving in authentic contexts involves learning for understanding, so that students can interact critically with resources, question them, examine logic and evidence, and connect ideas	• Existing knowledge is seen as raw material or as potential connectors for new knowledge creation and a context for developing students' learning capacity. Students are encouraged to connect concepts, and apply them to concrete real life situations. • High-level concepts and 'big' ideas support students and teachers to develop a coherent understanding about how ideas interact with each other. The division of subject knowledge into topics and units is avoided. Deep, relevant and authentic learning experiences are developed and assessment is tailored to the learning context. • Knowledge-generation activities are supported by encouraging students to recognise and navigate authentic problems rather than contrived and simplified versions in which teachers already know the answers and solutions. Systems and structures are designed and monitored to ensure they enable rather than constrain community connections. • Technology is exploited for its constructivist potentials and supports students to explore complex ideas and amplify their learning through extended opportunities for creating, connecting, communicating and collaborating.

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