This chapter overview presents the framework first published in the 2013 report *Innovative Learning Environments*. It is called “7+3” because it combines the 7 Learning Principles with 3 fundamental arenas of innovation: the pedagogical core, learning leadership and partnerships. The chapter uses the framework to understand different aspects of technology. Tool 2.1 allows a rapid overview by schools of arrangements in answer to the question “how innovative and powerfully learning-focused are we?” Tool 2.2 is for those learning environments ready to ask searching questions of both the elements and the dynamics of their pedagogical core. Tool 2.3 invites a learning environment, cluster or district to scrutinise its relationship with different partners and to consider how best to build future relationships. Tool 2.4 pushes users to chart how they currently use technology and invites them to identify a technology strategy in the service of innovating learning.
This chapter presents the Innovative Learning Environments (ILE) framework encapsulating arrangements for learning and teaching that are both powerful and innovative. We call it “7+3” because it is based on the 7 Learning Principles (Chapter 1) and three additional dimensions explained below. This chapter also discusses different aspects of technology as illuminated through the framework.

ILE uses the language of “learning environments” rather than “schools” or “classrooms” (see also Chapter 4 on the different levels as defined by ILE). This is not because we under-estimate the importance of schools but because our focus is the organisation of learning, not the institutions where this typically takes place. It is also because a great deal of learning occurs outside places strictly speaking called “classrooms” and even outside schools altogether. If you are a school, we suggest that you will get the most from this Handbook if you dwell less on the workings of the institution and focus instead on its core business – learning and teaching.

2.1 The ILE “7+3” Framework

The full framework maintains the 7 Learning Principles as fundamental to all activities and design but then adds three more dimensions to optimise the conditions for putting the Principles into practice (hence 7+3):

i. Innovate the pedagogical core of the learning environment, whether the core elements (learners, educators, content and learning resources) or the dynamics which connect them (pedagogy and formative evaluation, use of time and the organisation of educators and learners), or combinations of both.

ii. Become “formative organisations” with strong learning leadership constantly informed by evidence about the learning achieved through different strategies and innovations.

iii. Open up to partnerships by working with families and communities, higher education, cultural institutions, media, businesses and especially other schools and learning environments, in ways that directly shape the pedagogical core and the learning leadership.

Innovating the pedagogical core – key elements and dynamics

We call the elements and dynamics at the heart of each learning environment as the “pedagogical core”.

Four main elements comprise the pedagogical core in our framework: learners (who?), educators (with whom?), content (what?) and resources (with what?). Re-thinking and then innovating these core elements – each by itself and especially all four together – is to change the heart of any learning environment.

- The learners may be innovated by, for instance, inviting in family or other community members to become students or when learners from different sites are brought together through communications technologies.
• The profile of educators may be innovated as different experts, adults, family or community members and students take on teaching responsibilities alongside the teachers.

• Many approaches may be taken to innovating content, such as emphasising 21st century competences including social learning, inter-disciplinary approaches, or giving emphasis to specific areas such as language learning or sustainability.

• Similarly, there are numerous means to innovate resources, extending the reach of the learning environment through digital resources as well as redesigning facilities and learning spaces.

**Figure 2.1. Innovating the elements of the pedagogical core**

The basic ingredients or elements do not operate in a vacuum but are connected dynamically. How the connections are made between learners, educators, content and resources is normally so deeply-ingrained in schooling routines and cultures that they will often pass unnoticed and are taken for granted. But they powerfully shape what happens. We focus on four forms in which these dynamics are innovated:

• different mixes of *pedagogy* and *assessment* that promise to engage learners, create personalisation and realise the Learning Principles

• different ways in which *educators* work in the service of these pedagogies, sometimes alone but often collaboratively in diverse forms of team teaching

• re-thinking how *learners* come together at different times in optimal ways, re-examining such basics as single age/grade practices, size of classes and how students are grouped

• re-thinking the use of *learning time*, for instance, to personalise timetables.

Source: Adapted from Figure 7.1 in OECD (2013), Innovative Learning Environments, [http://dx.doi.org/10.1787/9789264203488-en](http://dx.doi.org/10.1787/9789264203488-en).
**Learning leadership and the formative cycle**

Learning leadership is critical for positive change to happen. It is exercised through visions and corresponding strategies intensely focused on learning. It calls for the expert engagement of those with formal leadership responsibilities. But it is also collaborative activity, including teachers, learners and others beyond the school itself. The leadership should be richly informed by evidence about the learning taking place. These are such key aspects of change and innovation that Chapter 3 is devoted to learning leadership and evaluative thinking, and this aspect of the framework is further elaborated in Section 3.1.

**Partnerships extend capacity and horizons**

Creating wider partnerships should be a constant endeavour of the 21st century learning environment, looking outwards and avoiding isolation. Partners represent potentially very fruitful sources of expertise and knowledge. Partners extend the educational workforce, the resources and the sites for learning.

Working with partners is to “invest” in the social, intellectual and professional capital on which a thriving learning organisation depends. It also contributes to one of the key Learning Principles outlined in Chapter 1 – promoting “horizontal connectedness”.

Such connections should include parents and families, not as passive supporters of schools but as active partners in the educational process. Partnerships may well include local community bodies, businesses and cultural institutions (such as museums and libraries). Partners drawn from higher education may be invaluable in extending the learning horizons of both students and staff and offering additional expertise for evaluation and research. As important as any of these partnerships are those with other schools and learning environments through networks and professional learning.

At the same time, especially given how professional time is so valuable and often scarce, this is not to advocate simply acquiring partners for their own sake. They need to be strategically chosen and will become genuine partners when they influence the pedagogical core, participate in the learning leadership and help to realise the seven Principles.
Partnerships enrich learning environments
• Active inside the pedagogical core
• Influencing the learning leadership
• Extending boundaries, drawing in new capacities

Making learning central – the ILE Principles

Running right through the framework are the Learning Principles – the “7” of the “7+3” – as shown at the heart of Figure 2.4 and as presented in detail in Chapter 1.
2.2 The multiple roles of technology in innovative learning environments

Technology may contribute to all the different components, relationships, partnerships and principles that make up the ILE “7+3” framework. That is why we have not identified a single technology “effect” or category in our framework despite it being a clearly crucial presence in the 21st century. It is everywhere and we cannot imagine learning environments not harnessing the potential of digital technology in some way(s).

Within the pedagogical core, technology can re-define the learners (e.g. by connecting those who otherwise would be totally unconnected); the educators (for instance, the online tutor or the teacher from another school or system); as well as the content by opening up otherwise inaccessible knowledge or by promoting 21st century skills using the media that are commonplace for learners outside school. The resources for learning may obviously be transformed and become digital; technology may re-define the very notion of a “learning space” including in virtual learning environments.

Student-driven learning and inquiry, collaboration, personalisation and flexibility may all be enabled and enhanced with technology, and options like simulations or games or distant real-time collaboration depend on it. A formative organisation relies on technology to manage learning data and feedback; distributed learning leadership may depend on it for communication, as might teacher learning using online materials, collaborative platforms or social media. Options for learning design and re-design may be critically informed by exemplars available on line, including any necessary support for them to be sustained.

Communication technologies and social media represent powerful means for partnerships to flourish, whether through the platforms for parents to engage in their children’s education or for teachers to engage with each other in professional communities or through offering access to expert knowledge developed elsewhere. It may be as simple as allowing partners to find each other more effectively.

At the same time, the mere presence of technology is not by itself sufficient to innovate learning environments. Nor should innovation be assumed to be synonymous with going digital, as this may only be reproducing traditional methods and pedagogies with a different format.
TO FIND OUT MORE


THE OECD “7+3” FRAMEWORK FOR INNOVATIVE LEARNING ENVIRONMENTS: THE TOOLS

**Tool 2.1 How well are we implementing the ILE framework?** The purpose of this tool is to gain a rapid overview of learning arrangements and organisation in answer to the question “how innovative and powerfully learning-focused is our school/learning environment?” It offers steps through which to interrogate your learning organisation in terms of the “7+3” frame. If you need to go more deeply, we suggest turning to other tools in this Handbook.

**Tool 2.2 How can we innovate our pedagogical core?** This tool is for those schools and other learning environments that feel ready for fundamental innovation in the organisation of their teaching and learning. This means attention to the elements and the dynamics of the pedagogical core, but also to bringing these all together, leading to the formulation and implementation of a holistic innovation strategy.

**Tool 2.3 Getting the most from our partners.** The purpose of this tool is to invite a learning environment, cluster or district to scrutinise its relationship with different partners and to consider how best to build future relationships. It is in three steps, each of which can be covered in separate sessions or they can be completed during a single retreat. The final session includes the identification of a single partner of strategic importance to be targeted in the future.

**Tool 2.4 Tapping into the multiple possibilities of technology.** This tool pushes learning environments to chart in detail how they currently embed and use technology. It invites them to identify a technology strategy in the service of innovating learning, often going well beyond the technology itself.
Tool 2.1
How well are we implementing the ILE framework?

The purpose of this tool is to gain a rapid overview of arrangements to answer the question “overall, how innovative and powerfully learning-focused is our school/learning environment?”

It involves getting the group to:

- Discuss all together the framework and clarify for themselves what it means.
- Break into working groups on each element of the framework. The different groups/sessions may best be led by those other than the principal. Try to reach consensus, or at least to clarify the main schools of thought. (Alternatively, with sufficient time, all in the learning community may want to take part in the review of all aspects.)
- Come back as a whole to bring together the main outcomes of the discussion and review an agenda for change.

The different aspects defined by the framework are taken up in more depth through other tools. So, if an area is identified as needing greater attention we suggest you consider using these next.

This tool can equally be used by networks, districts or system-level agencies with minor adjustments to wording.

The pedagogical core

The elements, relationships and dynamics at the heart of each learning environment we define as the “pedagogical core”. The elements and dynamics are separated into two groups in this tool. A more detailed focus on the pedagogical core is offered through Tool 2.2.

Innovating the key elements of the pedagogical core

The four principal elements identified through ILE are learners (who?), educators (with whom?), content (what?) and resources (with what?). Any one of these may be the subject of innovation, as indicated in the diagram.

Discuss these diagram questions as they apply to you. Then bring the ideas together to ask: How ready have we been to innovate the key elements of our pedagogical core as a whole in line with our overall objectives?
**Tool 2.1 How well are we implementing the ILE framework?** (continued)

**Figure 2.5. Innovating the elements of the pedagogical core**

Source: Adapted from Figure 7.1 in OECD (2013), Innovative Learning Environments, http://dx.doi.org/10.1787/9789264203488-en.

**Innovating the key dynamics in the pedagogical core**

The key elements of the pedagogical core do not operate in a vacuum but are connected dynamically each to the other. This module invites you to ask about pedagogy, the organisation of learning time and how educators and learners are grouped in their educational work.

**Figure 2.6. Innovating the dynamics in the pedagogical core**

Source: Adapted from Figure 7.1 in OECD (2013), Innovative Learning Environments, http://dx.doi.org/10.1787/9789264203488-en.
Tool 2.1 How well are we implementing the ILE framework? (continued)

Ensure that the group is familiarised with the diagram and the concepts involved, as they apply to your school or learning environment. Discuss your current practice in relation to the four dynamics. Then bring the ideas together to ask: “How ready have we been to innovate the key dynamics of our pedagogical core in line with our overall objectives?”

Learning leadership and the formative cycle

This module is about how the learning leadership is exercised, what knowledge about learning is being generated and how this feeds back formatively to the learning leadership to enable innovation and re-design. (More detailed treatment is offered through Tool 3.1.)

Discuss the diagram and get familiarised with learning leadership and the formative cycle. Then, address the following questions:

- How much is leadership focused on improving learning and who is influential in making decisions about teaching and learning?
- What are our learning visions and strategies and are they bold enough?
- How well do we capture evidence on learning and how well do we use it to inform our leadership decisions?

Figure 2.7. The learning leadership formative cycle

Source: Adapted from Figure 7.1 in OECD (2013), Innovative Learning Environments, http://dx.doi.org/10.1787/9789264203488-en.
**Tool 2.1 How well are we implementing the ILE framework? (continued)**

**Partnerships to extend capacity and horizons**

The contemporary learning environment needs strong connections so as to extend its boundaries, resources and learning spaces. Partners include parents and families, local community bodies, businesses, media groups and cultural institutions (e.g. museums and libraries) and higher education institutions. A key set of partners is represented by other schools and learning environments – working in pairs or more widely through networks and communities of practice.

A more detailed focus on partnerships is provided through Tool 2.3.

**Figure 2.8. Learning-focused partnerships**

Partnerships enrich learning environments
- Active inside the pedagogical core
- Influencing the learning leadership
- Extending boundaries, drawing in new capacities

Source: Adapted from Figure 7.1 in OECD (2013), Innovative Learning Environments, http://dx.doi.org/10.1787/9789264203488-en.

Consider the notion of partnership and how far the school or learning environment can be said to be positive towards building connections to different partners. Then, address the following questions:

- Are parents and families genuine partners? What more could we do to engage with them?
Tool 2.1 How well are we implementing the ILE framework? (continued)

• Who do we work with most as partners? Do they contribute to our learning vision and strategy?

• How well connected are we to other schools and learning environments and how could we get better connected?

Bringing it together through the ILE Principles of Learning

As the purpose of this tool is to get an overview of how your school/learning environment has moved in the direction of the “7+3” framework, the conclusions from the different group discussions relating to the three dimensions (the “+ 3”) need to be brought together. As a first step, compare the conclusions from the different groups and look for points of commonality.

Running right through the framework are the seven ILE Learning Principles, i.e.:

• Make learning central, encourage engagement and be where learners come to understand themselves as learners.

• Ensure that learning is social and often collaborative.

• Be highly attuned to learners’ motivations and the importance of emotions.

• Be acutely sensitive to individual differences, including in prior knowledge.

• Be demanding for each learner but without excessive overload.

• Use assessments consistent with these aims, with strong emphasis on formative feedback.

• Promote horizontal connectedness across learning activities and subjects, in- and out-of-school.

Consider the emerging conclusions from the groups addressing the three dimensions (pedagogical core, learning leadership and partnerships) in terms of putting the Learning Principles into practice. Discuss how well the school/learning environment already meets these principles, and whether change is needed. (If the overview provided by this tool is not sufficiently insightful, you may need to use other of the more detailed tools in this Handbook.)
Tool 2.2
How can we innovate our pedagogical core?

This tool permits the closer focus on the pedagogical core than the broad review offered by Tool 2.1. It is for those schools that feel the need to understand in-depth what is taking place in teaching and learning. It is for those looking to innovate based on a considered analysis of all aspects the teaching and learning relationships, rather than going straight to a particular innovative pedagogical approach. It is for those who are not in school settings at all, (say, in a community-based programme) for whom pedagogical innovation is just as important.

This tool assumes the readiness to delve deeply into current practices and to consider alternatives to ingrained habits – “the way we usually do things”. Its successful application depends on looking at all the elements and dynamics, rather than one of these in isolation. It may be conducted by the whole learning community or by the learning leadership as the champions of innovation.

Step One: Are we thinking enough about our core elements?

The starting point for the interrogation is careful review of the core elements: learners, educators, content and resources. The purpose is to gain a deep understanding of who and what these elements are in your own organisation, and how they might be innovated in line with your longer-term goals.

Figure 2.9. Questions on innovating pedagogical core elements

Source: Adapted from Figure 7.1 in OECD (2013), Innovative Learning Environments, http://dx.doi.org/10.1787/9789264203488-en.
Tool 2.2 How can we innovate our pedagogical core? (continued)

Address the questions in the diagram and record your answers. This cannot be done hastily, and you will need to be ready to revisit your discussions once you have engaged in Step Two on dynamics. While you may be tempted to start by breaking into groups on each of the core elements, these are fundamental questions that need everyone’s consideration. Consider carefully how one element influences the others.

If there are clear differences of opinion, try to resolve them but also “agree to disagree” rather than get stuck. Come back to those disagreements after Step Two.

Step Two: What about our pedagogies and organisation?

This step raises fundamental questions of method and organisation. It needs to be closely informed by your vision of your school or centre and who you are most seeking to serve.

Figure 2.10. Questions on innovating pedagogical core dynamics

Address the questions in the diagram, extending to others of your own if necessary. Make sure that you cover all the boxes in order to consider pedagogy, time use and the organisation of learners and educators, rather than focusing only on one. It will also be necessary to bring them together to gain a holistic picture - they need to be coherent one with another. This cannot be rushed.

Source: Adapted from Figure 7.1 in OECD (2013), Innovative Learning Environments, http://dx.doi.org/10.1787/9789264203488-en.
Tool 2.2 How can we innovate our pedagogical core? (continued)

At this stage and in the light of your review of dynamics, you may wish to return to Step One to reconsider some of your conclusions about the elements.

Step Three: Making a strategy

Now is the time to draw together all your ideas about your core activities of teaching and learning in order to innovate the pedagogical core. What will the new strategy look like? How will it be an improvement over what we do now? Most of all, how will it transform the learning of our students?

Create a narrative that sums up why change is needed and how this will revitalise your core activities in the service of your goals. Be ready to work on the narrative in more than one draft, so that it can eventually serve as a guiding statement for all concerned. As you design the strategy, ensure that all the learning community are engaged in the process.

An integral part of the strategy will be aspects covered elsewhere in this Handbook, and we suggest that you consider three in particular:

- the Learning Principles
- your partners, especially parents and the community
- evaluation and tracking of the strategy.

We are not suggesting that you use several tools simultaneously but that the overviews introducing the other chapters may usefully inform your strategy.

Step Four: Following through

Put in place a road map for implementing the strategy. Be ambitious but realistic at the same time. Consider not just the change you want to bring about but how you intend to influence those factors that will drive that change. Set milestones, anticipate setbacks and gather relevant evidence.

We think you will find the steps on evaluative thinking (Tool 3.2) helpful to guide this process even if you do not wish to follow its method in detail.

Be ready to revise the strategy in the light of experience and evidence. Be aware that innovation is often accompanied by a dip at first while it embeds before taking off. Do not let this throw you off course unless it is very clearly not working.
**Tool 2.3**

**Getting the most from our partners**

The purpose of this tool is to encourage you as a school/learning environment, cluster or district to scrutinise your relationships with different partners and to reflect on future relationships. It is in three steps, each of which might be handled in a separate session. Alternatively, all might be completed during a single workshop or retreat. It leads to the identification of a single partner of strategic importance to be targeted in the future.

As this discussion should be as frank as possible, you may decide that it is preferable not to invite your existing partners to take part. When the three-step sequence is finished, however, it will have significant implications for engaging them or for moving forward with others instead.

**Step One: Who are our partners now?**

Do this scoping work carefully. In the accompanying overview, we mention those partners featured most in our ILE cases, but there may well be others. Include other schools or associations with whom you network and those partners who only work with particular teachers or faculties. All teachers should take part. Be ready to revisit this partnership profile as new ones are remembered or added.

Pay attention to the educational bodies you include. Include those with whom you work collaboratively through professional choice (e.g. a school working closely in partnership with a local college to address particular student needs) but do not include offices with whom you have a strictly administrative or hierarchical relationship.

**Step Two: Partners’ engagement in the pedagogical core and learning leadership – How well are we doing?**

It is now time to discuss the quality of the partnerships and how successful the existing partnerships are for your main curricular goals and teaching and learning strategies. Could they do more? Are there some who are disappointing and not partnering as effectively as they might? How much is that to do with you or them – are you sufficiently open to their potential contribution?

Focus in particular on the pedagogical core and learning leadership: how much are the partners involved in your core activities? Are you sufficiently networked, and are current connections integral to your main work?
Tool 2.3 Getting the most from our partners (continued)

Step Three: Which priority partnership next?

Focus on your main strategy for engaging students in learning and raising achievement. Might a particular partnership relationship – with, say, the local community, or a higher education institution, or other learning environments – be key to unlocking progress?

Consider both your existing partners and potential partners with whom you do not yet have an active relationship. This phase will take more time than the previous ones. It will call for the close engagement of the leadership team who will need to listen to suggestions and consider different options.

If it is difficult to address these questions because the central learning strategies are not sufficiently clear it may be that you need to apply one of the previous basic tools on the 7 Principles, the Spiral of Inquiry, or the “7+3” framework first. If so, hold onto the knowledge gained from Steps One and Two on the partnership profile. Then, return to identifying a priority partnership on the basis of this more general scanning and scoping.
Tool 2.4
Tapping into the multiple possibilities of technology

The “7+3” framework gives schools, networks and districts a way to inquire into the many ways in which technology is or could be a part of learning arrangements, rather than to see technology application as an end in itself.

Step One in this tool will give you a detailed understanding of how you are currently using technology. Step Two will stimulate reflection on specific changes needed, focusing first on what works inadequately at present and needs to be fixed. Step Three invites reflection on how technology can help you move towards fuller achievement of the Learning Principles and related strategies.

Step One: Audit of existing technology use

A superficial stock-take would only look at equipment. While that needs to be included in the audit this tool invites you to go much further.

The three dimensions – the pedagogical core, learning leadership and partnerships – should all be included, (the 7 Principles come into play later during Steps Two and Three). The questions for each feature of the learning environment or system are: “How is technology contributing and is this stable or dynamically changing?”

You need to take the time to build as full a picture as possible. For instance, under the first bullet point below – learners – the review may include such aspects as learner mobile phone use, digital divides among learners, technology use at home, etc. Record variations, such as when technology is prominently used by particular teachers or for particular subjects compared with when it is not. Be careful to avoid over-reporting technology use – it needs to be an accurate review. Collaborative research may be needed.

The elements of the pedagogical core:

- the learners (pupils, students and any others who may be actively learning, such as groups of parents or seniors, including from a distance)
- the educators (teachers, ancillary staff, voluntary and occasional expertise, tutors at a distance)
- content (curricula, coursework, knowledge and skills, including digital knowledge and skills and aspects of the curriculum that depend on digital access and use)
Tool 2.4 Tapping into the multiple possibilities of technology (continued)

- **resources** (this refers especially to learning and educational resources and it covers digital materials and use of space and infrastructure for learning. But it may include the financial resources invested in technology [human resources have been counted under “educators”]).

**The dynamics of the pedagogical core:**
- the **pedagogical mix, including assessment** – how technology is used as part of pedagogy and how information is stored and used
- how **learners are grouped** – ways that technology is used to inform or facilitate different forms of learner grouping
- the organisation of **learning time** and how this is structured or facilitated using technology
- **grouping and collaboration among educators** – how technology is used to inform or facilitate different forms of educator grouping, including how materials and student information are shared.

**Learning leadership and the formative cycle:**
- **visions, learning strategies and implementation**: the role of technology as a vehicle for these and how they are recorded and communicated
- **the role of professional learning** in realising the strategies, and where this is facilitated through information and communication technologies
- how the **leadership is informed about the learning taking place**: evaluation, review, information systems and how these are digitally-based
- how widely **leadership is shared** beyond senior management through ICT, especially (but not only) teachers and learners.

**Partnerships extending capacity and horizons:**
- **Who are the different partners**, how were they identified and how connected to the learning environment using technology? Are any of the partners specifically focused on extending digital capacity and expertise?
- The role of **networks and communities of practice**, to which the organisation or individuals within it belong, and how mediated through technology.
Tool 2.4 Tapping into the multiple possibilities of technology (continued)

Take time to discuss how the audit should be put together and whether it is complete. Be sure you have tapped into all relevant sources of information, including learners, and share the results with them. Do not move quickly to judge what works well and less well: the purpose of undertaking an extensive audit in Step One is to appreciate fully the current situation and to avoid a hasty diagnosis of priorities for change.

Step Two: What works well? What works less well?

Gain consensus on what works reasonably well. Discuss the reasons for coming to this positive assessment.

Then, focus especially on where digital skills, systems or use represent important barriers to positive change. These may be shortcomings in teachers’ technology skills but they may extend well beyond these. Having addressed problems, check that the original assessment of what works well does not need revision.

Choose problem areas that are preventing you fully from realising the learning strategies you wish to follow. Constantly use your audit as the evidence base to inform judgements.

Step Three: Strategies to address the problems

Discuss how best to address the stumbling blocks, bearing in mind that the most effective solutions may not be technological at all. Decide how best to integrate these solutions into the larger learning strategies. Use the full audit to consider organisation-wide strategies as well as addressing discrete problems. Define objectives and possibly set targets related to the audit in terms of where you would like to be in the future.

Define a time period after which you will do a review of progress. Decide which aspects need to be monitored on an on-going basis.

When the time is reached, discuss how successfully the strategy has achieved its objectives. Decide then whether a new audit is needed and the tool repeated, or whether one of the other tools might be more useful.