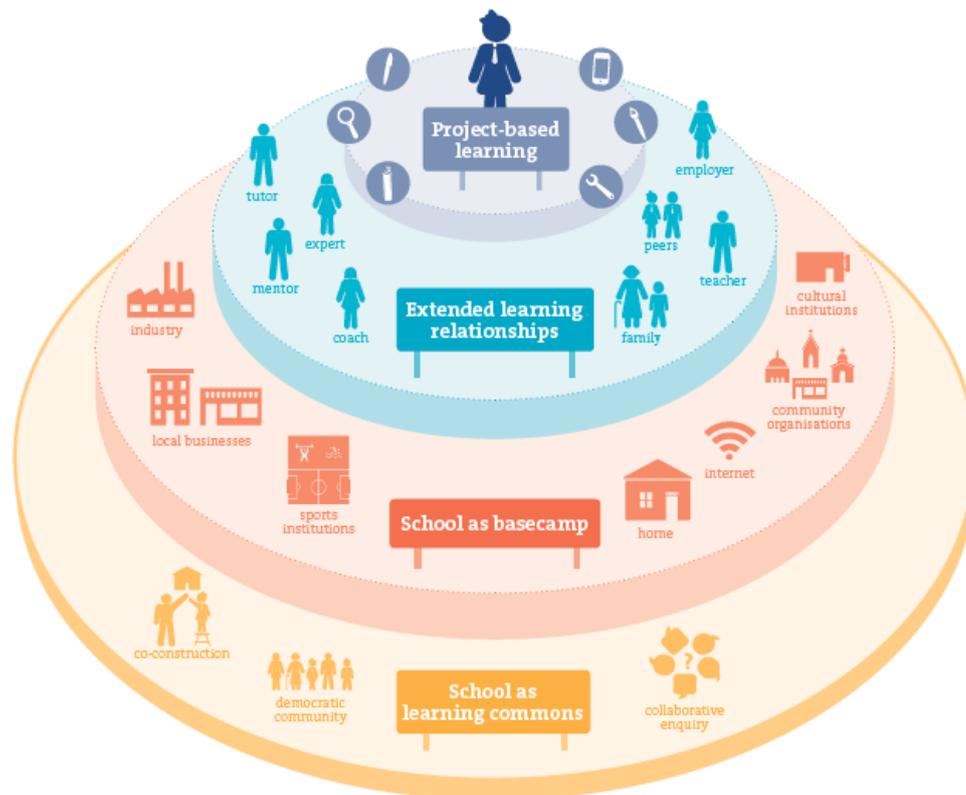


## Section 3. Design Principles for Engaging Schools

From *The Engaging School for School Leaders: Pages 37 – 52*

The full resource can be found and accessed for free from [www.innovationunit.org](http://www.innovationunit.org) then click on Learning Futures. A range of PDF resources are available.



11 Inspired by Ron Berger's *An Ethic of Excellence: Building a Culture of Craftsmanship with Students*. Heinemann (2003)

# 1. Pedagogy and Assessment

## A. Engaging Schools are committed to rigorous project-based learning

We have found that project-based learning is the most engaging pedagogical design. It is more comprehensive than many of the alternatives, and encompasses lots of different ways of teaching and learning that have a strong evidence base, such as enquiry-based learning, problem solving, and traditional instruction. Using these methods within project-based learning gives students a sense of agency; it gives them a belief that the results matter, that their learning is purposeful. This sense of purpose comes through producing work products of real value, and presenting them to an external audience beyond the school.

At the centre of our approach to project-based learning are three simple but powerful concepts<sup>1</sup>:

- **Exhibition** – presenting the output of your project at a public event, to which teachers, students, families and members of the local community are all invited.
- **Multiple drafts** – making several draft versions of your project output, in order to make sure the final version is as high quality as possible.
- **Critique** – using protocols, so that students can have structured discussions about which aspects of their peers' work are most effective, and how they can be improved.

Of these three concepts, exhibition is the most fundamental. It changes the nature of the project from the moment students start working – because they know they will need to literally 'stand by' their work, under scrutiny and questioning from family, friends and total strangers. This inspires a level of ambition and commitment much greater than is fuelled by the incentive of getting good marks.

This heightened ambition is enabled by producing multiple drafts, because it allows students to engage more deeply in their work, and to internalise an expectation that they need to (and are able to) produce work of a high standard. Critique goes hand in hand with multiple drafts, giving students an opportunity to learn from each other's work and from each other's feedback in a structured, safe context. In addition, bringing in professionals from outside school to critique students' work can be especially powerful.

When students are working on projects, they are not only learning science, history or music but learning how to be scientists, historians and musicians.

Designing projects around the passions of teachers and students builds enthusiasm and ownership. Their learning matters more to them. Projects with real-world connections engage students. Project-based learning gives students a greater say and more choice

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<sup>1</sup> These are taken from Ron Berger's *An Ethic of Excellence: Building a Culture of Craftsmanship with Students*. Heinemann (2003)

in what is studied and how it is taught. Students have a legitimate role in the design, delivery and outcomes of projects. This builds their ownership of their own learning.

For more information about project-based learning, see our companion publication, *Work that Matters: The Teacher's Guide to Project-based Learning* (download from [www.learningfutures.org](http://www.learningfutures.org)).

## **B. Engaging Schools rebalance student enquiry and transmission teaching**

There is no sense in which we advocate a return to discovery learning, where teachers cede all responsibility for learning to students. It makes sense for teachers to deploy their expert subject knowledge appropriately – we must not throw out the baby with the bathwater. Moreover, powerful research evidence now exists<sup>2</sup> on the optimal roles for teachers to adopt in the active facilitation of students' learning. When students are engaged in extended, challenging projects driven by their own enquiries, teachers need to adopt a variety of roles to support deep learning. Sometimes the teacher will act as an advisor, sometimes as a facilitator to help groups work more effectively together, and sometimes the teacher will use traditional transmission based learning. However, one would expect teachers to spend less time using transmission teaching in the context of project-based learning, than in a more traditional classroom.

## **C. Engaging Schools maximise time for deep learning by simplifying the timetable**

One of the main barriers to deep learning and to teacher collaboration is the virtually ubiquitous one-hour lesson. To counter this, many of the schools in the Learning Futures programme are exploring different units of time for lessons. A simple move to a 10-lesson week (2 half-day lessons per day) opens up multiple possibilities to deepen learning and make community-based or community-engaged learning much more feasible. One school uses these half-day blocks for faculties, who then own the time and can choose to have one-hour lessons some of the time for more traditional teaching and use half days at other times.

A number of schools in the Learning Futures programme have introduced some whole-day lessons, offering up to 40 whole-day sessions in one year. Block weeks (between three and six whole-week units each year) allow for the design of project-based learning, community-based projects, internships or fieldwork enquiries. Some schools use these weeks for community-action projects. One school includes a residential, learning-camp week for the whole of its Year 7, with Year 11 students taking on leadership and co-tutoring roles.

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<sup>2</sup> John Hattie, *Visible Learning* (2009)

## **D. Engaging Schools use authentic real-world assessment**

The essential characteristic of powerful assessment is that it is an integral component of learning. Formative assessment should be integrated into traditional classroom teaching and project-based learning. It should be a part of peer teaching, peer-critique, and student self-assessment. Students need a language of assessment as much as they need a language of learning.

In Engaging Schools, assessment is owned by the students who are being assessed. For assessment to really drive future learning, assessment criteria need to be understood and to really matter to the students being assessed. The most engaging means of doing this is for the learner to co-construct the assessment criteria with teachers. Where parents and community members are involved in project-based learning, their involvement in assessment secures their understanding and their involvement.

A key component of this is the creation of authentic assessments using external audiences with a real-world interest in the products of students' learning. This means that businesses, community organisations, experts, parents and local residents are all potentially assessors and examiners of student work. Obviously, other teachers and students in the school community can provide authentic assessment too.

Engaging Schools use exhibitions, portfolios, performances, applied demonstrations, installations, publications and micro-enterprises as potential modes of assessment. Of course, they also use external examinations and qualifications, but these tend to come at the end, rather than during, the learning process.

## **2. Curriculum**

### **A. Engaging Schools integrate curriculum subjects within student projects**

The first thing to say is that most of the schools we have worked with in the Learning Futures programme have adopted an approach which views the curriculum as being a combination of subject-based teaching and integrated project-based learning. The schools that have gone the furthest in replacing nearly all subject-based teaching with integrated projects are small schools. Why? Because small schools don't have the breadth of subject specialist teachers to organise their curriculum, timetable and staffing structure into different subjects. In small schools, in both the UK and the US, integrated and interdisciplinary teaching is the norm, because it has to be the norm.

So in an Engaging School, while typically a significant proportion of the timetable will continue to be taught in subjects, there will be a roughly equal proportion taught in interdisciplinary projects. Integrating multiple curriculum subjects requires a completely different model of planning and design for teachers. Some schools start by pairing

subjects such as Humanities and English, or Science and the Arts. Others have much broader scope. Some use skills and competencies as the way of organising their curriculum. This approach offers a way in which staff from different disciplines can design and facilitate students' learning together.

At Matthew Moss School in Rochdale, two days a week are given over (in Years 7, 8 and 9) to integrated project-based learning entitled 'My World'. At Cramlington Learning Village in Northumberland, the school year contains a number of weeks where Years 7 and 8 experience whole-week activities, projects, and community-based learning experiences. At High Tech High, every day contains four hours of project-based learning on projects that might last for many weeks.

Critics of project-based learning often cite the need to cover curriculum content as a reason for not using it in school – especially where external tests feature. In fact, good project-based learning begins with the needs and passions of the learners, but also ensures that the learning designs incorporate all necessary content. The increased motivation and engagement that come with a purposeful authentic project results in students digging deeper into the requisite knowledge – the students producing a remembrance publication about World War Two survivors understand the need to get their facts right before interviewing war veterans. Increased engagement and deeper learning do not limit the coverage of the curriculum.

## **B. Engaging Schools have a curriculum that integrates 'head and hand' – knowing and doing**

In a conventional school curriculum there is remarkably little doing, and much less applying of learning to real-world situations. Where there is more application and 'doing' it tends to be in particular subjects, like the Arts, or design technology, or physical education, rather than the application of knowledge and skills, from a range of different subjects and disciplines, to more complex and challenging situations.

Interdisciplinary project-based learning offers an alternative approach, in which both knowing and applying that knowledge is equally important – utilising both head and hand, just as in the real world.

Making and doing things is a very engaging way of learning – and engaging learners is a priority for Learning Futures schools. It has long been understood that it is also a route to deep learning. As John Dewey said, 'profound understanding derives from activity'<sup>3</sup>. The motto of the Massachusetts Institute of Technology, one of the world's most respected universities, is *Mens et Manus*, which translates as 'mind and hand'. The educational ideas of MIT's founders were about promoting, above all, education for practical application.

So, for example, when student groups are set the project of designing and initiating a campaign to increase the number of blood donors in their locality, it offers abundant

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<sup>3</sup> Quoted in the interview with High Tech High's CEO, Larry Rosenstock, on the Edutopia website [bit.ly/wW601P](http://bit.ly/wW601P)

scope for both head and hand. Examples of content elements might include the history of blood donation, the science involved, data gathering and data analysis, the economics involved, the human stories, blood donation by geography and by social class, international comparisons etc. The doing part could involve community-based surveys, interviews with donors and recipients, materials development, poster creation, video-making, campaign design and implementation, creating advocacy from local businesses etc.

The point, though, is not the specifics, so much as the potential for academic rigor, deep engagement, and learner agency – making learning work in very real ways; involving head and hand.

### **3. Teachers and Students**

#### **A. Teachers in Engaging Schools plan, design, and teach in teams**

Collaborative planning by teachers is most powerful when it brings together teachers from different disciplines to share their expertise, when it builds from team teaching, when it includes reflection on one another's practice, and when teachers talk in detail about the learning of individual students.

Engaging Schools expect teachers to work collaboratively, to engage in peer critique and challenge, to support each other's development and professional learning, and to share responsibility for each other's success – after all we expect the same of students. As a principal, this is hugely powerful. Engaging Schools do not tolerate disengaged teachers or mediocre practice. A mutual expectation of teaching excellence combined with shared responsibility to help each other to be outstanding teachers, is a hallmark of a strong, professional school culture.

Teachers who work in Engaging Schools are committed to evidence-informed practice, to keeping up to date with the research knowledge-base in education, and they are committed to contributing to that knowledge base through action research. Although subject knowledge is important, the primary expertise of teachers in Engaging Schools is knowledge of pedagogy – knowing how to design and facilitate great learning experiences for young people.

#### **B. Teachers in Engaging Schools really know their students as individuals, and the students feel known as learners**

In an Engaging School teachers work more intensively with fewer students than in other schools. The result is that they understand their students and their learning needs better. This is not possible in a school where teachers have to teach 200 or more individual students each week.

Another route to ensuring that every child is really known by the adults in the school is to increase the faculty to include all the adults working in the building. Some of the schools in the Learning Futures programme have small tutor groups or advisories run by teachers and other staff, where every adult member of staff has a group of 12 to 15 students of all ages. This requires significant whole-staff professional development, and includes all staff in the cultural norm of talking about student achievement and individual needs. Some include all staff in the building in the design and support of pedagogy – made both feasible and desirable when students are engaging in community-based learning programmes.

The point here is, of course, about multiplying the number of adults within school, who are available to engage with, and add value to, each young person's learning. It is about increasing the range of sources of support, in order to enrich learning.

### **C. Students in Engaging Schools feel a sense of ownership and take responsibility for their learning**

In an Engaging School, the ways in which the school's curriculum and pedagogy are designed not only allow but demand that students take responsibility for their own learning within and beyond school. They foster high degrees of learner ownership. This is the most powerful approach to personalised learning we have seen. Teachers cannot be expected to personalise the learning of every student as effectively as the students themselves. A teacher's role is to build learner ownership and responsibility, and support students to personalise learning for themselves.

In an Engaging School, students are engaged learners, committed to supporting each other's learning, and their teacher's own learning. To that end, they are invited to provide critical and supportive feedback through a range of processes, including student enquiries into teaching and learning, classroom observation, school democracy and participation in teacher action research. Digital technology makes this engagement more achievable than ever before. In particular, mobile devices, such as tablets and smartphones, provide students with the means to carry out research, ask questions of each other and their teachers, and provide commentary, feedback and advice at all times, whether in or out of school. Around the world, more and more schools are utilising mobile devices to these ends, seeing that they provide an opportunity for learning, rather than a threat to it.

## **4. Parents and Community**

### **A. Engaging Schools recruit local organisations to provide authentic locations and opportunities for learning**

Most schools, including those in the Learning Futures programme, struggle to find real and meaningful opportunities for student learning that goes beyond the school walls. There are, of course, good reasons for this. First, large schools tend to have

complicated timetables, which makes substantive time learning off site in local organisations a headache to organise. It is no coincidence that schools that have excelled at recruiting local organisations as authentic locations for learning, such as Studio Schools, Big Picture Learning and Expeditionary Learning, are schools that have adopted much simpler timetables.

However, more importantly, these successful schools started with the principle of learning beyond the classroom, and then built their timetables around it. Most schools fail because they attempt to bolt on learning outside school to the way the rest of the school runs. Throw in the increasing concerns around risk assessment, health and safety, internet firewalls (because learning beyond the classroom happens virtually, as well as physically), and it is little wonder that many schools complain that 'we tried that, but it didn't work'.

Learning beyond the classroom (and school) is a natural partner to project-based learning: taking projects into the community gives them a sense of place, enhancing student (and school) engagement; equally, students working on projects beyond the classroom are required to be like the adults they work alongside (be like an ecologist, be like a photographer, be like a scientist), making the learning more purposeful and pervasive.

However, since each school's location and partnerships differ, it is not possible to be prescriptive about how to structure learning beyond the classroom. Instead, we present a range of opportunities for authentic learning outside of school:

- **In assigning staffing responsibilities** – cultivating meaningful external partnerships cannot be added to a teacher's existing workload. Creating and maintaining (the hard part) such relationships needs to be a discreet administrative function.
- **At the learning design stage** – local community organisations and businesses should be enlisted to co-design extended internships, provide expertise in student projects, set authentic project briefs and contribute to assessment strategies.
- **In supporting learning through ICT** – social learning platforms (blogging, Twitter, video conferencing tools), mobile technologies and virtual learning environments all facilitate more flexible, personalised learning, and help bridge the gap between how young people learn in, and out of, school. Necessary safeguards need to be put in place, but these should protect, not prohibit or inhibit.
- **Presenting learning** – there are few more motivating aspects of students' learning than presenting the outcomes in a public space. Using local venues (cinemas, bookshops, community centres or performance spaces) gives authenticity to the task, and provides the culmination of a partnership. It enables all those engaged in the process (parents, experts, mentors, beneficiaries) to interrogate and honour the learners' contributions and achievement.

The benefits of this hard work pay off. The UK schools inspection agency (Ofsted) has underlined the importance of learning beyond the classroom<sup>4</sup>. Highlighting its impact on students, it cites important cognitive benefits: students not only remember the emotion and excitement of learning beyond the classroom, they remember the knowledge acquired outside the classroom more powerfully. There is a strong correlation between schools that were judged 'improving' or 'outstanding' and their support for learning outside school.

## **B. Engaging Schools actively involve parents and volunteers as tutors, experts, mentors and coaches**

Schools are relatively unique in terms of the reservoir of latent goodwill and expertise that exist within their surrounding communities. This is not just about the talents, skills, expertise, experience and goodwill of parents, but they are a good place to start. Schools' historical stance towards parents has been defensive. Of course, we say that we want their involvement, but communication strategies with them tend to be one-way. Formal means of engaging and interacting either emphasise the unequal relationship (such as parents' evenings) or involve parents at a low level of utility (such as PTA meetings or fundraising events). Looked at through the other end of the telescope, parents and community members care about their local school. Many of them have a considerable amount that they could offer. If only we knew how to capitalise on that.

Schools have long been far too precious about the so-called professional skills of teachers – which, we have argued earlier, should relate to the design of great pedagogy and the integration of curriculum subjects and disciplines. Teachers do not have an exclusive skill-set in terms of forming powerful relationships with young people, tutoring them well, responding to welfare needs, engaging with parents, offering guidance or a host of other functions that support learning inside and outside the classroom.

An Engaging School seeks to offer a truly personalised set of learning experiences, made possible by rethinking the roles of the adults who support learning – teachers, parents, other staff and volunteers. We recognise four valuable roles, tailored according to the needs and preferences of each student's personal learning needs:

- tutor
- expert
- mentor
- coach

In most schools, adult professionals invariably perform these roles, but we believe that parents, members of the local community, and indeed students themselves, all have a vital part to play in extending the range of learning relationships available.

Below are snapshots of some of the strategies which can be adopted – taken from schools in the Learning Futures programme – in order to extend learning relationships:

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<sup>4</sup> Ofsted, *Learning Outside the Classroom: How far should you go?* (2008)

- Parents assuming the role of learning coaches. Following training, parents can share a language of learning with their children, and can therefore question, challenge, and support the learning process in an informed way.
- Deploying (and often employing) recently-graduated students in subject-specific mentoring roles. We have seen that students are able to be more open and honest with near-to-peer mentors than they would be with their teacher. They are also more motivated by the different social dynamic. Again, there is an investment required – mentors need to be trained – but the improvement in student motivation warrants such investment.
- Using community and business experts in critiquing student enquiries and projects. Their input gives authenticity to the work of students, and helps transform engagement. A precursor to this should be a register of businesses and community organisations and/or a skills audit of parents.

### **C. Engaging Schools work in partnership with parents and respect them as the primary educators of their children**

Engaging Schools recognise that parents are the primary educators of their children. They are the principle educators during early childhood and the most continuous educator as they grow up. This needs to be stated because, despite early years and primary school educators' acknowledgement of this role, secondary schools have tended often to see a parent as a client (at best) or as a part of the problem (at worst). Traditional attempts to involve parents in students' learning at secondary school can be banal: consultations, committees, volunteers at fundraisers.

Project-based learning makes a partnership with parents more possible, with authentic purpose. It provides points of access, it makes connections easier, the blending of school, and community learning provides realistic roles for parents – and their contribution to student assessment offers active and meaningful participation.

In summary, we hope that leaders and practitioners will read the above design principles, not as separate elements but as part of a coherent whole, best seen in relation to each of the others. When a school is able to evolve its culture to one that is open and collaborative, to re-imagine how time can be used creatively, use projects as a component of the curriculum and make its boundaries and borders permeable to community learning, so it becomes more natural to engage adults within the learning process.