

LEARNING FUTURES

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A contribution to the *Innovative Learning Environments* project of OECD/CERI

Introduction

The *Learning Futures* program began as a development and research initiative, focused on schools, between Innovation Unit¹ and the Paul Hamlyn Foundation², both UK-based organisations. The purpose was not to create innovative learning environments per se; but rather to address the persistent and endemic problem of the *lack of engagement* which characterises many young people's experience of schooling, and undermines their learning. Beginning in 2009 with initial scoping, analysis, horizon scanning, and discussions with schools and learners, the program evolved to become a practical innovation catalyst involving some 40 schools across England, eventually focusing on a smaller number of schools to develop a *Learning Futures* (LF) model in more depth. A number of these schools³ are included in the OECD Innovative Learning Environments Project Universe of case-study examples, and that material is not repeated here. Innovation Unit is now publishing a free set of materials and tools to assist schools who wish to move in this direction, and is working with a number of schools in the UK and internationally to support them in the change.

The focus of *Learning Futures*: The problem of engagement

Across the world, the debate has grown about the need for change in education systems. Every nation is convinced of the centrality of successful arrangements for education, and none believe that their current position will do. The language employed by policy-makers ranges from that of 'reform' to that of disruptive transformation. Moreover this has become a more democratised debate, as digital tools have enabled anyone to contribute to an argument which is no longer a quasi-professional 'walled garden' but a vibrant concern to all parties in societies – and most particularly to learners themselves.

Among the world's 'developed' countries, there is growing concern about the quality of the learner experience. This manifests itself most obviously in dropout rates; in mediocre levels of achievement, and in disengagement with a boring and irrelevant experience. Moreover, focusing on dropouts masks a bigger issue, because it only takes account of the visibly disengaged. There is a much larger group of people who do reasonably well in school but do not become self-motivated, self-directed learners: they may appear to succeed in a highly-controlled, assessment-driven environment but struggle when left to their own devices in university, or when looking for a job. The 21st century requires people to be lifelong learners (because technology, politics, economics, and the environment are changing so quickly), and this demands a shift away from being 'schooled', to *engagement in learning*.

LF examined the evidence that lack of *engagement* is a widespread problem. In the UK, former Chief Inspector of the Office for School Standards, Mike Tomlinson reported:

¹ Innovation Unit is a not-for-profit social enterprise committed to using the power of innovation to solve social challenges. www.innovationunit.org

² The Paul Hamlyn Foundation is one of the UK's largest grant-giving organisations. www.phf.org.uk

³ Cramlington Learning Village, Northumberland; Matthew Moss High School, Rochdale; Biddenham International School, Bedfordshire.

*Over 20,000 young people in Britain (approximately 1 in 24) each year give up on going to school by the age of 14, over 350,000 leave with no GCSE qualifications at all, and more than 140,000 leave with no GCSEs above grade D.*⁴

In research undertaken for the UK Department of Education⁵ 10% of British students reported that they ‘hated’ school. This hatred is to be found in disproportionate levels amongst less privileged learners. The Sutton Trust which has long investigated issues of social mobility found⁶ that the data reveal extremely high rates of ‘leakage’ among the least privileged pupils – those qualifying for free school meals:

Two thirds (2,850) of these top performing FSM pupils at age 11 in Key Stage 2 tests are not among the top fifth of top performers taking GCSEs at age 16. And a further half (680) of the pupils who remain among the top fifth of top performers at 16 do not subsequently go to university at age 18. This equates to a total loss of around 3,000 high performers in this one cohort of pupils who had showed academic potential, but who had not subsequently entered higher education.

And evidence shows that the poorer your family, the more likely you are to be disengaged. On the other hand, highly engaged students from poor backgrounds tend to outperform disengaged students from wealthy backgrounds.

Similar data regarding disengagement are to be found in Canada and in the US. The Canadian Education Association regularly surveys students’ attitudes to school⁷. The picture it reveals is one of dislike growing with age: levels of engagement fall steadily from Grade 6 to Grade 12, while intellectual engagement falls during the middle school years and remains at a low level throughout secondary school, e.g. attendance falls from a high of 90% in Grade 6 to a low of about 40% by grade 12. The picture revealed by US research is even worse. A large scale study – over 350,000 students in 40 States conducted by Indiana State University⁸ - shows that

- 25% of students in the class of 2008 in public high schools in the U.S. did not graduate “on time” (defined as 4 years after entering high school)
- 98% of students feel bored at school at least some of the time; two thirds feel bored every day
- Half of students have skipped school
- 20% of students have considered dropping out
- A quarter of students feel unchallenged by lessons

This ‘visible disengagement’ is the sharp end of the problem, but it is not the whole story, because schools and businesses are becoming increasingly conscious of ‘disengaged achievers’: students who are adept at achieving high marks, but not at dealing with the more complex challenges that they will face as 21st century workers and citizens.

⁴ M. Tomlinson, ‘Thousands drop out of school at 14’, *Daily Telegraph* (23 February 2009)

⁵ Department For Education, Gilby et al., *National Survey of Parents and Children: Family Life, Aspirations and Engagement with learning in 2008*

⁶ The Sutton Trust, *Wasted Talent? Attrition rates for high-achieving pupils between school and university* (2008)

⁷ Canadian Educational Association, Wills et al., *What did you do in School today?* (2009)

⁸ Indiana University, *Charting the Path from Engagement to Achievement: A report on the 2009 High School Survey of Student Engagement* (2009)

Taken together, the data point to a widening disconnect between what interests, motivates and engages young people in their ‘real’ lives and their experience of schooling; and that this disconnect grows steadily during the secondary school years. Privileged backgrounds off-set this; but even they do not guarantee that schooled students will emerge as lifelong and successful learner, equipped for 21st century conditions.

Moving from the micro (student experience) to the macro (societal requirements of education systems) LF also found a compelling case for change.

Naturally the exponential rise and ubiquity of *digital technologies* impacts centrally on the assumptions and routines of learning systems designed in the 19th and 20th centuries. Learning is a knowledge industry, and the sheer volume and accessibility of knowledge – formerly only available through restricted channels – requires a re-think of the roles of teachers, learners, and para-educationists. As long ago as 2000, it was estimated that the amount of knowledge in the world doubled during the previous decade and at that time was said to be doubling every 18 months.⁹ Internet-connected devices are expected to become ubiquitous to the point of invisibility over the next decade.¹⁰ Aligned to this shift is that of *connectivity*: how we communicate and connect with each other has changed irreversibly. The world’s most popular social networking site, Facebook, has over 500 million active users worldwide,¹¹ and 43% of 9-12 year olds in the UK have a profile on a social networking site.¹² This is not to argue that technology that will lead or in itself transform changes to schooling. So far it has not – nor perhaps is this desirable. However, the conventional functions and roles of schools (other than that of custodial child care) will increasingly come under fundamental challenge.

Education has become subject to *globalisation*. Today millions of students are studying outside their home countries, whilst online learning plays an increasingly important role in education (and as we mentioned above, this has both an informational and a social component). Moreover education systems are now more capable (arguably) of comparing their outputs with those from across the world through more reliable testing systems such as the OECD’s *Programme for International Student Assessment* (PISA). Educational practices are no longer a parochial concern. Globalisation of the world economy is, for most politicians, the clinching argument in the drive to modernise education, because the perception is that future growth and prosperity will depend upon the ability of the system to produce a competitive workforce with higher-order skills. Are schools teaching the right skills, and how they can do it more effectively? There is in addition a subtler and perhaps more profound implication arising from globalisation: the need for ‘global competence’. This requires new knowledge and skills, but also new dispositions and awareness, with significant cultural and social implications. As well as understanding other cultures, developing global competence offers up for scrutiny and question our sense of our own identities, core values, and cultural practices.

It has become clear that the pressures of the 21st century demand not just a new range of skills, but a new range of literacies – that is, areas in which we need to be able to both comprehend and express ourselves: the skill of meaning-making. The most obvious is information literacy – as information becomes both increasingly abundant and increasingly contested, the ability to find and evaluate information, as well as to express it in a variety of media, is becoming commensurately important. More gravely, unless humans can learn to see themselves as part of a complex, interconnected and interdependent system on a planet with limited and diminishing resources, the prospects for the species are poor. ‘Eco-literacy’ is the term being adopted to capture this form of meaning-making. Acquiring it entails the acquisition of new skill-sets, dispositions, knowledge and values. Additionally

⁹ D. Wetmore, ‘Time’s a Wastin’ *Training and Development Magazine* (ASTD) September 2000, pg. 67

¹⁰ Oliver Burkeman, ‘The Internet is Over’ *Guardian* 15 March 2011

¹¹ From Facebook website (<https://www.facebook.com/>)

¹² Sonia Livingstone, ‘Social Networking, Age and Privacy’ EU Kids Online 2011

however, it could be argued that it also entails a vision of education which is driven by active engagement in a wide variety of environments

Learning Futures as a program set out to explore how changes to the key organisational conditions and design principles in schools can enable significant shifts in pedagogy, curriculum and assessment. The overall aim was, and is, to affect the quality of engagement in learning which young people enjoy, and ultimately achieve their transition to successful lifelong learners.

What is meant by ‘engagement’?

The LF program believes that what we have historically looked for in school to identify an engaged student amounts to little more than compliance. A student is typically thought to be engaged if they attend regularly, conform to behavioural norms, complete work on time, are considered to be ‘on task’, and respond to questioning. But evidence has shown that the disengaged achiever could be displaying all these characteristics yet remain bored, and unlikely to be valuing the experience or the learning (if there is any).

One of the first objectives for the LF schools was to re-calibrate their ambitions – to join a growing international movement of researchers and educators *looking beyond compliance to commitment*. We identify this deeper form of engagement, a commitment to learning both within and beyond school, through a number of learner characteristics:

- When the student cares, not just about the tangible *outcome* of their learning (usually their test scores), but also the *development* of their learning;
- When they take responsibility for their own learning;
- When they bring discretionary energy to the learning task;
- When they can locate the value of their learning beyond school, and wish to prolong learning beyond school hours.
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Re-conceiving of engagement in these terms both points the direction in which pedagogy (and the associated curricula and assessment systems) need to move; it also suggests new ways of schools evaluating their efforts. Hence one of the by-product tools of the program has been an engagement survey tool for use with learners, predicated on the above characteristics.

The LF program worked from this definition of what authentic engagement looked like to ask: what design features might we need to incorporate into learning activities to see more students deeply engaged, more of the time? It emerged with a mnemonic – *The 4 Ps of Engaging Activities*:

- ❖ **Placed** – the activity is located, either physically or virtually, in a world that the student recognises and is seeking to understand;
- ❖ **Purposeful** – the activity feels authentic, it absorbs the student in actions of practical and intellectual value and fosters a sense of agency;
- ❖ **Passion-led** – the activity enlists the outside passions of both students and teachers, enhancing engagement by encouraging students to choose areas of interest which *matter* to them;
- ❖ **Pervasive** – the activity enables the student to continue learning outside the physical and temporal constraints of the classroom, drawing on family members, peers, local experts, and online references as sources of research and critique.

Activities incorporating as many of these design features as possible have been seen to trigger high levels of student engagement. These four criteria provided a useful checklist for teachers formulating their learning designs, but also suggested what a school needs to offer to become more engaging in itself: a place-based curriculum, purposeful projects, passion-led teaching and learning, and pervasive opportunities for research and constructive challenge. The LF team, working with the school sites, moved next to curate and develop the most powerful and promising practices of which the innovation horizon scan had made them aware, and grouped them into a set of four approaches, or design principles.

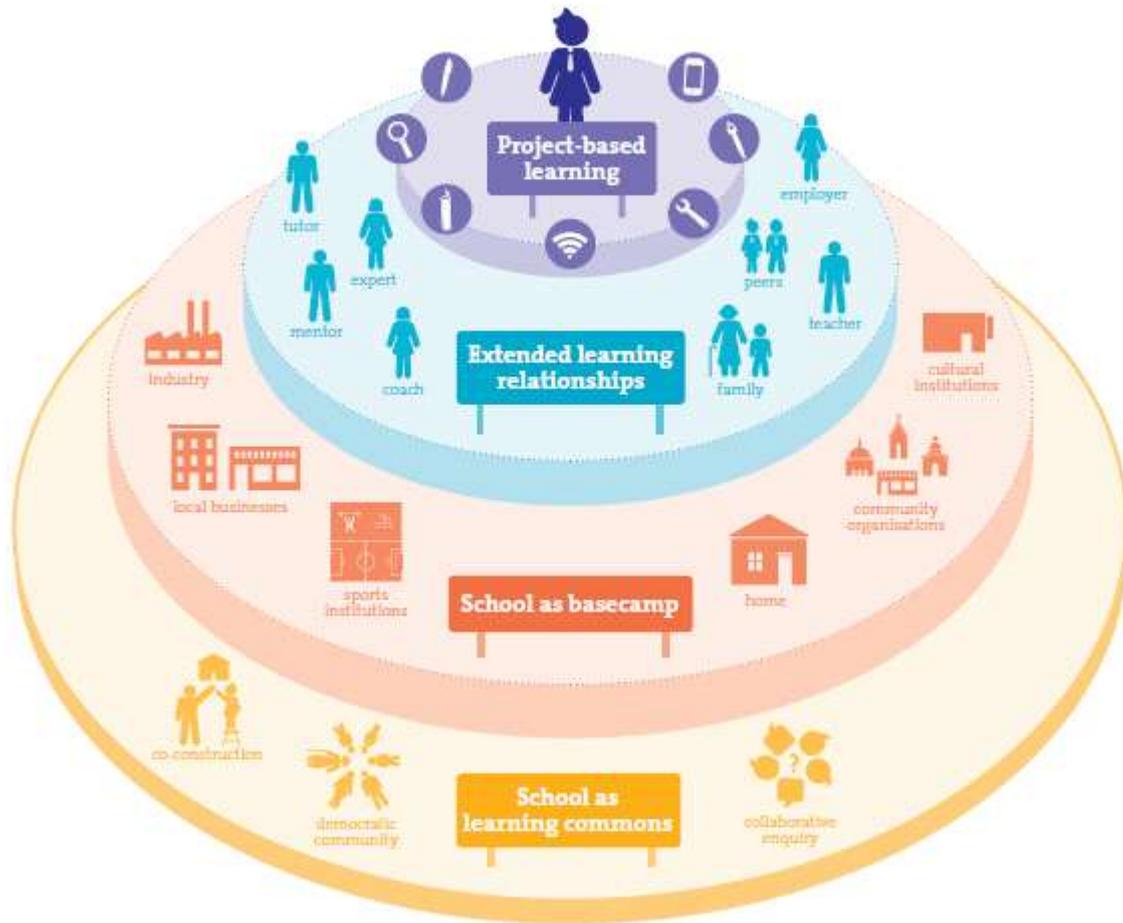
The LF design principles

The approaches, or principles, which were felt to hold particular promise in making a school more engaging are:

- ***Project-based Learning*** – Students design, plan, and carry out an extended project that produces a publicly-exhibited output such as a product, publication, or presentation.
- ***Extended Learning Relationships*** – Taking account of (and utilising) every student's extended learning relationships (peer-peer, student-teacher, involving parents or external mentors or businesses), so that learning is something that can happen at any time, in any place, and with a wider range of coaches, mentors, and experts.
- ***School as Basecamp*** – Treating school as a basecamp for enquiries, rather than as a final destination and sole source of knowledge.
- ***School as Learning Commons*** – Transforming school into a common ground for which teachers, students and the local community share responsibility, where they share authority, where they *all* learn, and from which they all benefit.

While the approaches are separately listed and explained further below, the experience of the schools (and the findings of the evaluation by the University of Bristol¹³) are that they are strongly interconnected, and more powerful in combination: building a learning commons culture inevitably extends the learning relationships therein; treating school as a basecamp provides the broad platform for projects to engage in meaningful work. Each reinforces the other, and extends the support available to students.

¹³ University of Bristol. *Learning Futures Final Report* (2011)



Project based learning

Give the pupils something to do, not something to learn; and the doing is of such a nature as to demand thinking [...] Learning naturally results.

John Dewey, *Democracy and Education*¹⁴

Project-based Learning is the most visible example of the pedagogical changes made by Learning Futures schools. Whilst educators will draw distinctions between project, enquiry (also known as inquiry), and problem-based learning, in reality the differences are minor – particularly in comparison to more transmissive, lecture- or worksheet-based forms of learning. Great projects grow from enquiries in order to solve problems. Students have found them highly engaging because they are conducting work that is meaningful, to them and their families or communities. They relish the opportunity to make adult-world connections, work across disciplines, and in extended blocks of time.

Learning Futures worked closely with international partners – the *High Tech High* schools in San Diego, California – to apply rigour to the design and execution processes, jointly creating a teachers’

¹⁴ John Dewey, *Democracy and Education: An Introduction to the Philosophy of Education*, Macmillan (1916)

guide to project-based learning¹⁵. Emerging from this partnership are three critical pedagogic elements that make the difference between student work that ticks the necessary boxes, and work that students take pride in because of its excellence¹⁶:

1. ***The use of multiple drafts*** – Students understand that, in real life, the end-product is almost never the first draft. Using multiple drafts makes the learning visible, and enables the student to see their progress towards excellence.
2. ***The use of peer (and expert) critique*** – Critique supports the process of drafting, and deepens the learning conversation. Talking about exemplary work raises student expectations and instils critical thinking.
3. ***The public presentation of projects*** – Nothing makes the learning more authentic than having literally to ‘stand by’ your work and be interrogated by experts from the local community.

Case Study: Cramlington Learning Village, Northumberland

At Cramlington Learning Village in Northumberland, North East England, almost 200 students spent an entire week working on projects based around the theme of ‘sustainability’. Working in small groups, students could choose between a diverse range of issues and disciplines. One group of students chose to investigate the history, geography and culture of people and places along the river Tyne, presenting their findings through music, film, drama and art. They set up a Skype link to Nagarjuna Academy, Cramlington’s partner school in Nepal, where students from Kathmandu explained the human importance of their great river, the Bagmati. As the project leader observed, “This was a brilliant way of teaching students that rivers are vital for people all over the world, and often in very different ways”. They interviewed ex-miners and shipyard workers, as well as people who now earn their living along the river, asking important questions about the power of place, of dialects, and of belonging. The stories, images and music captured and re-created by the students were made publicly available through blogs and Twitter feeds, making the learning both porous and pervasive. Members of the public were intrigued to see QR codes appearing throughout the week at various landmarks along the river. Accessing these codes took the visitor to the particular banner, song or essay that the students had created. The climax of the week was a presentation at the Cramlington Festival of Learning – having such public presentation of their work was a powerful motivating force for students.

When done well, the power of such projects is clear to all involved, though teacher concerns about ‘content coverage’ persist. LF takes the view that project-based learning needs to be complemented with more conventional knowledge-based teaching. It is the blend which is key. When asked, both students and staff felt that project-based learning should be blended with more conventional teaching at a ratio of around 60:40. This is an entirely unscientific perception – or preference. It would seem to be an area which would benefit enormously from systematic research and reflection; and indeed may be context sensitive (not least in terms of the stage of development of a school or system; and the degree to which teachers have developed expertise in the method). Another of the Learning Futures schools, Monkseaton High School, has blended enquiry with *Spaced Learning*¹⁷ – a content-rich pedagogy which is based upon neuro-scientific research on how memories ‘stick’ – and student outcomes in this particular blend have been highly impressive.

¹⁵ *Work that Matters: The teachers’ guide to project-based learning*. Paul Hamlyn Foundation / The Innovation Unit (2012)

¹⁶ Inspired by Ron Berger’s *An Ethic of Excellence: Building a Culture of Craftsmanship with Students*. Heinemann (2003)

¹⁷ *Spaced Learning: Making memories stick*. Paul Hamlyn Foundation / The Innovation Unit (2011)
http://www.innovationunit.org/sites/default/files/Spaced_Learning-downloadable_1.pdf

Extended Learning Relationships

Alice is a successful young designer who coaches some of our students in Design and Technology. She isn't another pair of hands in the classroom, she isn't a Teaching Assistant, she isn't merely a resource; she's an inspiration to students, she's 'what I can be and what I want to be and what I will be if I listen to her'. (Thomas Hardye School)

One of the key factors in increasing engagement is the extent to which the student feels a sense of agency over their own learning – that they have a say in how, and by whom, their learning can best be supported. Extending the range of learning relationships is therefore of critical importance. The purpose of the *Extended Learning Relationships* approach is to recognise that the best learning is inherently social, and to see how the central teacher-student relationship could be complemented by a diverse group of 'others' interacting with the student.

Four types of relationships were identified which students found helpful: *tutor, expert, mentor, coach*; and four sources of each of these: *peer, parent/carer, teacher, other adult*. Each of the roles can be filled by each of the 'cast'. Sometimes these roles are filled by design, based on obvious expertise; sometimes they are serendipitous. Indeed some of the more exciting innovations have occurred when roles are filled by the least expected. Perhaps the only generalisations which can be made here are that the opportunities for a rich *range* of learning relationships should be optimised; and that there should be openness to considering some unusual or unconventional role-assignments.

Schools continually struggle with fully utilising the expertise surrounding them, in their local parents, carers, businesses, and community groups; getting beyond the occasional field trip, or ad-hoc visit, places additional, and often unwelcome, demands upon schools and administrators. In response to this challenge, the recently developed Studio Schools in the UK (a venture from the Young Foundation in partnership with Edge)¹⁸ have a specific member of staff with delegated responsibility for employer and community connections

LF schools are starting to maximise the immense potential that lives on their doorsteps – though they acknowledge that more could, and will, be done. For example, Matthew Moss High School has intensified its efforts to have adults other than teachers work with their students. Staff from Bristol University's Graduate School of Education ran viva examinations, not for post-graduate students but for Year 7 learners. Matthew Moss High School is now in the process of recruiting future learning supervisors from their local communities. Other schools are drawing upon local experts in helping assess student projects, and Noadswood School in particular has worked hard to develop parents' skills in becoming learning coaches for their children. By offering a yearly training course for parents, Noadswood has both eased the burden on teaching staff – and enriched the learning conversations taking place in the home and, especially, on parents' evenings in school.

Adults are only part of the picture. Schools frequently overlook the most powerful resource they have in extending learning relationships: their own students. In many of the Learning Futures classrooms, young learners have become 'co-tutors', older students have become mentors to younger students or acted as learning coaches working under the teacher's supervision. In the Harris Federation's Commission for Learning (see below, *School as Learning Commons*), students have become experts in teaching and learning approaches through a sustained, collaborative enquiry alongside teachers.

School as Basecamp

The benefits of learning outside the classroom are well documented: According to the UK's inspection agency OFSTED, even when done badly student attainment rises and engagement is enhanced when learning is located beyond the school. Most LF schools have made the commitment to seeing school as the basecamp, not the destination, for learning – but they are still at an early stage of

¹⁸ Studio Schools are a new state school model focusing on enterprise and designed for 14-19 year olds of all abilities. You can find out more at <http://studioschoolstrust.org/>

implementation. The imperative is clear, however, as the relevance and authenticity of learning out of school, working in real contexts alongside professionals, adds fresh energy to engagement. Building it into the curriculum as an entitlement, not a bolt-on, is now the challenge.

In the course of the LF program, schools have arranged for students to be working in universities (building a hovercraft), climbing mountains, in museums (animating children's stories), galleries, cinemas and professional football clubs. None of these were 'trips' or study visits – they were part of coordinated partnerships, engaging students in proto-professional tasks.

Those schools which have developed *Project-based Learning* as a core pedagogy have, inevitably, seen the greater impact of, and need for, *School as Basecamp* – the two should go together. Classroom-bound projects will often feel inauthentic to students if opportunities to locate the work in local communities or businesses are not realised.

But the basecamp metaphor does not simply apply to physical spaces for learning – LF schools are finding innovative ways to ensure the 'destination' for learning can be reached through technology too. For example, a number of schools have put digital technologies at the heart of learning, supporting the use of mobile devices with open connectivity to the curriculum and peer learners. A number of schools use Skype as a means to reach experts around the world. Students from Matthew Moss, for example, recently took part in a *High Tech High* hosted 'Transatlantic Collegial Conversation' – speaking with learning experts from across the UK and US.

With increasing use of social media (blogging, forums, Twitter, and YouTube) schools now have no excuse not to extend both the learning relationships and the locations for learning. There are issues around safeguarding children, but these are surmountable and there is mounting evidence to show that the benefits of using social media as a means to take learning beyond the classroom include:

- ✓ Significantly enhancing motivation – Students receiving external comments on their blogs has a galvanising effect;
- ✓ Imbuing tasks with a sense of authenticity – Reinforcing the sense of purpose in the learning activity;
- ✓ Enhancing students' motivation to prepare 'multiple drafts' of their work, through widening the number of peer and expert critiques now available. As already noted, these twin strategies will substantially improve the quality of project-based learning;
- ✓ Increasing the 'adult-world connections' in their learning – Cramlington students tweeting in the Tyne Project benefitted from regional experts contributing ideas and challenges;
- ✓ Improving literacy – A recent study by the National Literacy Trust showed that children who kept a blog enjoyed writing more, believed they had better writing skills, and had more confidence in their writing than their peers who didn't keep a blog¹⁹.

A number of barriers face a school trying to become a basecamp, including timetable limitations, safeguarding concerns, transportation costs, and limitations to internet access; but achieving this outward-facing orientation grounds the school in the students' lives and provides them with paths to explore the wider world.

Schools as Learning Commons

The LF program has concluded that however effectively the three approaches above are put into place, they must have a supportive school culture which grounds them, and allows them to be owned by students, staff, and parents alike. Without it, the innovations are likely to fail. Throughout the course of the Learning Futures programme, the reason why an innovation may succeed in one school but fail in another was not – as educational folklore would have it – because of the vision and

¹⁹ Christina Clark and George Dugdale. *Young people's writing: Attitudes, behaviour and the role of technology*. National Literacy Trust (2009)

commitment of the school's leader. Rather, it related to the fit with 'the way we do things around here'. That said, of course, the leadership of the school can play a transformative role in creating, or shifting, the culture of the school.

The metaphor LF has adopted to capture the culture required to facilitate engagement is *School as Learning Commons*. By this is meant an open, curious, welcoming, democratic environment; one which values learning for all its members and where the professional learning of staff is prevalent and visible. A learning commons culture imports external ideas that challenge internal views and beliefs and, in turn, exports its students – and their assets – to the community it serves. It relentlessly questions what makes for great learning, and it shuns the professional jargon of learning so that parents can play a full part in these conversations. The staff sees membership in a professional learning community not as a personal opt-in, but as an essential driver for change – and the necessary time and structure to support this community are created. A learning commons culture recognises the important part that students can play as peer enquirers/researchers, and welcomes their active involvement.

Most important to a learning commons, perhaps, is the belief in the principle of co-construction. The term, originally coined by Professor David Hargreaves as "the readiness to treat students as active partners in the design, implementation and evaluation of their education", goes beyond the now fashionable concept of student voice. Co-construction requires giving students the "ability to co-construct with others all aspects of education – teaching, learning, curriculum and assessment, indeed everything that makes up the experience of schooling".²⁰

Case Study: The Harris Federation, South East London

The Harris Federation's Student Commission for Learning is a striking example of a conscious decision, taken by the Federation's Executive, to create a learning commons culture in their 12 schools. Students and teachers spent two years working together to define the future direction for learning. Together they researched learner motivation, the changing role of the professional, the impact of technologies upon learning, and a host of other concepts. This collaborative enquiry was, in itself, a powerful innovation, realigning staff and student perceptions of each other. For example, as part of the evidence-gathering phase of the student commission for learning, Harris students and staff hosted an imaginative, if exhausting, 'Big Learnover' – a 24-hour marathon discussion with students from schools in the UK, Australia, Sweden, and our partners at High Tech High in California. This was followed up with students and staff visiting innovative schools in America. Staff and students alike believed that such experiences created a renewed mutual respect for each other, and ensured effective co-construction in the future.

But the crucial aspect of the commission lay in its establishment as a democratic vehicle: The Federation's Executive committed itself, from the outset, to implementing the findings of the commission. Without trusting the process, or their students, this could have been viewed as a reckless gesture. For the students, however, it was transformative, and they frequently commented upon the sense of responsibility they felt. Though many of the students involved in the commission had a history of disciplinary problems, they have become articulate advocates for young people's entitlement to engaging and enriching learning. In particular, they were clear about how much it has meant to them to play a role in determining the future of their schools – part of being engaged in something is having a stake in it.

The outcome was a set of entitlements for students, for teachers, and within the curriculum that are designed to sustain the culture of co-construction developed through this process.¹ Entitlements prioritise enquiry, enterprise, learning to learn, independent learning, and more flexible timetabling; students and teachers now co-design, and co-teach, across the curriculum and across all of the academies.

²⁰ David Hargreaves. *A new shape for schooling?*. Specialist Schools and Academies Trust (2006)

The senior leadership team at Matthew Moss High School have created an outstanding example of a learning commons. They have invested in all manner of instruments to create a culture that is single-mindedly focused on learning, making time and space for collaborative enquiry and reflection, sending teachers out to other schools, and inviting inward peer and expert critique of their structures and innovations. But the most profound embodiment of their culture is seen in the co-construction of every aspect of the experience of learning with their students. Students are given significant responsibilities in their approach to project-based learning – budgeting, sourcing materials, managing logistics, co-designing and assessing. As a result, researchers found their students to be confident, engaged, and articulate about their identity as learners.

Too many schools, perhaps, operate within an ‘enclosed’ environment, both physically (rows of desks in sectioned-off classrooms, within fenced-off buildings) organisationally (with tightly prescribed timetables, educational targets, behavioural codes) and culturally (looking in, not out, for inspiration, tethered to top-down diktat, passively teaching to examinations requirements).

The University of Bristol research team found that:

What was characteristic of schools which were leading in Learning Futures pedagogies was the involvement of all stakeholders in decision making around core processes. Whether it was students, parents/carers, teachers or leaders - those people implicated in a process would participate in its co-construction, implementation and evaluation.²¹

Making these cultural shifts demands significant extra effort, but without them pedagogic changes are unlikely to result in either engaged students or an engaging school. Building a learning commons is a long-term process, requiring constant cultivation, reciprocity, and commitment from all involved. But with technology transforming the learning that happens socially (that is, outside formal education or the workplace) into a *global* learning commons, this cultural metaphor should be seen as one all schools will need to realise in the future; arguably, it is necessary if schools wish to remain relevant in the 21st century.

Benefits and Conclusions

As noted at the beginning of this paper, conventional views of engagement (and also therefore conventional ways of measuring it) do not capture the characteristics of ‘deep engagement’ that Learning Futures schools have aimed to achieve. From analysing the experiences, personal testimonies and teacher perspectives on their Learning Futures students and building on the earlier definition, the University of Bristol research team characterised deeply engaged students as “generative knowledge workers”. By this they mean:

...students able to take responsibility for their own learning processes, to work constructively with the mass of data and information that is available to them, formally and informally, in their learning lives, and to achieve an intellectually rigorous outcome representing new and meaningful knowledge (at least new to them).²²

This is in contrast to students more used to being a ‘knowledge receiver’, where the learning process begins with the knowledge itself communicated by experts in a traditional, didactic manner and works from the ‘top down’ as learners then seek to integrate the knowledge and make it meaningful. In too many cases however, knowledge is not made personally meaningful and students are only able to receive and repeat pre-determined sets of knowledge without achieving a deep level of engagement with their learning.

Inevitably, given the extent of the pedagogical changes and challenges that LF brought to the participating schools and teachers, in just two years, practice on the ground was variable and although many teachers and the researchers saw significant shifts in learner engagement for individuals and

²¹ University of Bristol. *Learning Futures Final Report* (2011)

²² University of Bristol. *Learning Futures Final Report* (2011)

across participating student cohorts, not surprisingly the extent of these varied between classes and schools. Many students, but not all, exhibited characteristics of a “generative knowledge worker”. There was evidence that students eligible for free school meals (a proxy for socio-economic disadvantage) were generally less engaged in their learning at school than those who were not eligible, both before and after their Learning Futures experiences.

What was clear was that schools that overtly framed their Learning Futures interventions to foster a greater sense of student agency – including the Harris Federation Commissioners, Matthew Moss High School, Biddenham International School, and Linton Village College – saw very high levels of engagement from their students.

The research examined students’ experience of LF pedagogies, paying attention to the quality of the learning process and the quality of the learning outcomes. From an analysis of students’ experience, their personal testimonies and the perspectives of their teachers, the researchers identified three key indicators of deep engagement that were fostered by the best LF practice. These were ‘authenticity’, ‘identity’ and ‘agency’. Not surprisingly, these relate closely to our 4 Ps of engaging activities described in the early section of this paper.

Students experiencing *authenticity* in their learning were able to integrate their personal motivation and interest with the public requirements and demands of the curriculum. They described an intrinsic passion about what they were learning. What they were learning mattered to them and they would often continue their learning beyond school. The University of Bristol research team in talking to students about the pervasiveness of their learning, found that

Students who were deeply engaged in their own learning presented an integrated story about their process of learning in their project, which moved seamlessly into their life beyond the school - both laterally and temporally.

This link between deep engagement and student *identity* was a further key insight and finding of the research team. The most deeply engaged students had a strong sense of self-identity as learners and could see their learning dispositions (such as resilience, strategic awareness, resourcefulness and creativity) as pliable, rather than fixed. These Learning Futures students who took responsibility for their learning tended to ‘own’ and be comfortable with the language of learning (using first-person references when talking about learning dispositions). They were more likely to have a positive attitude towards themselves as learners, and to be more engaged.

As researchers we witnessed a story unfolding, through a rich, accurate and owned language in which the students themselves were the story makers. Such rich language use about the self as learner was characterised by metaphor, image and story to describe things that may otherwise have been in accessible or difficult to articulate²³.

Similarly, colleagues in South Australia are discovering that, just as engagement is a pre-cursor to learning, so a positive learner identity and growth mindset (following Carol Dweck’s work²⁴) is a precursor to learner *interest* (which, in turn, precedes engagement). Without a positive self-identity and growth mindset, students are unlikely to ever become engaged, or achieve their potential as learners.

The third key indicator that the University of Bristol researchers saw correlating with learner engagement was *agency* – the extent to which students feel they are determining the shape of their own learning. Making choices, generating knowledge (through activities such as generating questions, mind mapping to make sense of a mass of information, descriptions of events or phenomena, collecting information, uncovering stories, undertaking formal research and negotiating and preparing

²³ *ibid*

²⁴ Dweck, C. S. (2006). *Mindset: The new psychology of success*. New York: Random House.

for assessment events) and taking responsibility were all in evidence as indicators of student agency and deep engagement.

Innovation Unit will, in 2012, launch a set of free resources - materials, handbooks, tools and videos – to support schools to innovate in the direction of *Learning Futures*, further to evolve and refine the model.