

As the focus of our education system shifts from a preoccupation with producing pupils who pass exams to creating independent lifelong learners with the skills to thrive in the fast-moving knowledge-based economy of the 21st century, curriculum managers are seeing the many benefits the new personal, learning and thinking skills (PLTS) curriculum has to offer. This month's Case in Point looks at how best to embed PLTS to develop resilient, creative learners who have flexible skills and competences, work well in teams and can achieve their potential – so that they are ready for life in our 21st century global world.

Embedding PLTS in whole school practice

Jackie Beere helps curriculum managers get to grips with what PLTS is all about so they can then successfully embed it across their school's curriculum in the way that is right for their students

Imagine a world where students worked towards six GCSEs in addition to their literacy and numeracy qualifications. Those subjects could be:

- self-management
- effective participation
- creative thinking
- reflective learning
- independent enquiry
- teamworking.

If important subject skills and knowledge were embedded in these qualifications, but the outcomes were dependent on students developing these personal, learning and thinking skills (PLTS), wouldn't employers feel that we had better prepared students for work and for life?

Despite constant improvements in formal qualifications, employers complain about a lack of communications skills, and of a thirst for learning, aspiration, initiative and self-discipline. The new focus on PLTS gives

an opportunity to redress the imbalance between the content-driven testing culture we now have and move further towards a creative, active approach to learning.

What is PLTS intended to develop?

Simply, the skills PLTS is intended to develop are those already listed: self-management, effective participation, creative thinking, reflective learning, independent enquiry and teamworking. Who would not want to help students learn to fully develop skills such as these? But how should we go about it?

There are many theories of learning such as Howard Gardner's (1993) ideas regarding multiple intelligence; David Kolb's (1984) cycle of experiential learning which requires a shift 'towards teaching how to do some—thing'; Daniel Goleman's (1996) seminal work on the impact of emotional intelligence (EI) on learning and Black and Wiliam's (2006) research into the impact of assessment for learning (AfL) as an

alternative to summative assessment. All have profound implications for the development of 'learning' in our schools.

This was echoed in the teaching and learning review (Gilbert, 2007), which reported on the requirements for personalising learning by 2020 recommended that:

all children and young people leave school with functional skills in English and maths, understanding how to learn, think creatively, take risks and handle change.

The direct response to this recommendation was the development of the PLTS:

a framework of six groups of skills that, together with the functional skills of English, maths and ICT are essential to success in learning, life and work.... Learners will need to apply skills from all six groups in a wide range of contexts from ages 11–19. (QCA, 2009)

Social and emotional intelligence are a key part of the learning skills PLTS are intended to develop – as the box left illustrates.

Knowledge of how our brains work is crucial to embedding PLTS into the school culture. Teachers, pupils and parents need to understand how to engage the brain and manage their minds for learning. Pupils could then use this knowledge to develop transferrable skills, especially in literacy, numeracy, communication and self-management they need to become the emotionally intelligent, flexible learners needed for the 21st century. The neuroscience issues teachers and pupils should know about are listed in the box on page 3.

What sort of curriculum will really deliver the PLTS?

PLTS, along with other recent curriculum reforms, has brought about a paradigm shift in emphasis to give a greater focus on how we learn. The aims of this is to develop an educational system that helps students learn more effective life skills rather than learning

Learning skills PLTS develop in students

Self-managers

Young people who organise themselves, showing responsibility, initiative, creativity and enterprise with a commitment to learning and self-improvement. They embrace change, responding positively to new priorities, coping with challenges.

Effective participators

Young people who actively engage with issues that affect them and those around them, playing a full part in the life of their school, workplace and community.

Creative thinkers

Young people who think creatively by generating and exploring ideas, making original connections, trying different ways to tackle a problem, working with others to find imaginative solutions and outcomes of value.

Reflective learners

Young people who evaluate their strengths and limitations as learners, set realistic goals and criteria for success, monitor their progress, inviting feedback making changes to improve their learning.

Independent enquirers

Young people who process and evaluate information in their investigations, plan what to do and how to go about it, taking informed decisions, recognising others have different beliefs and attitudes.

Team-workers

Young people who work confidently with others, adapting to different contexts, taking account of others' views and responsibility for their own role in resolving issues to reach agreed outcomes.

(QCDA – see: www.qcda.gov.uk)

'stuff' ('stuff' that can now be accessed in seconds on the internet). This should include developing in pupils a deep understanding of their own learning profiles and how to use these to develop their potential. This involves teaching pupils to reflect on how they learn best and how they can develop their flexibility as learners to enable them to transfer skills (see Prashnig, 2006).

The present models of a compartmentalised curriculum based on subject content, the teacher as an expert and the student as a passive recipient have not produced the skills and competences our young people need to become successful learners. The Royal Society for the encouragement of Arts, Manufactures and Commerce (RSA) Opening Minds curriculum (see: www.openingminds.org.uk) is one alternative model being adopted in schools with promising outcomes, including improved motivation and a confident approach to independent learning.

Opening Minds is a curriculum framework that delivers modules or projects incorporating materials from a range of subjects, usually taught by one teacher but planned by a team of subject experts. The RSA has developed its own set of competences: Citizenship, Learning, Information handling, People management and Situation management (CLIPS). The PLTS have at least partly evolved from this set of competences and many schools now use their own version of competences depending on their pupils' needs. This type of curriculum experience has always been a (small) part of school life through cross-curricular days, trips and residential. However, the competency curriculum approach explicitly promotes and even privileges the competences and aims to measure success in them as well as in the acquisition of subject knowledge and skills.

Teachers when delivering this type of lesson become facilitators of and for learning, as well as subject specialists. The work produced has been impressive enough for schools to demonstrate improvements in standards, for example in literacy levels and ultimately in exam results. One of the most powerful outcomes reported by schools is the impact on staff who have taught the course, as this comment from one Opening Minds teacher illustrates:

I was wary about teaching outside my subject area but when you see how the students are motivated and achieving so much more you realise it's about teaching students how to teach themselves.

Some schools have used the Futurelab Enquiring Minds framework for developing their competency curriculum (see: www.enquiringminds.org).

This uses an 'enquiry cycle' to encourage a dynamic active approach to learning where students develop their capacity for critical judgement, rational understanding and democratic deliberation through collaborative learning. This framework, alongside the Philosophy for children (P4C) approaches (see: www.sapere.org.uk) to a community of enquiry, present new models of pedagogy that put students firmly in control of their own learning. It privileges the development of communication skills and competences above the acquisition of knowledge, so it is an effective strategy for developing the PLTS across the curriculum.

Many schools have adopted various approaches to developing 'learning to learn' over the years, ranging from training days to discrete courses for students and 'learning passports' to use across the curriculum. The approach conceived by Guy Claxton outlined the five Rs: reflectiveness, resourcefulness, responsibility, reasoning and resilience (for more details, see: www.campaignforlearning.org). This has been used by several schools to develop their competency-based approach. This framework also has clear links into the PLTS and for some schools can provide a simple starting point for the crucial process of metacognition about learning.

Many schools have found the more flexible KS3 curriculum provides opportunities for a radical shift in focus from teaching content to learning skills.

Whether it is termed themed learning, project-based learning, enquiring minds or a competency curriculum, the crucial difference is a change in focus towards engaging pupils in active rich learning experiences that develop self-management, with a focus on teamwork to develop excellent communication skills. This focus fits well with implementation of a social and emotional aspects of learning (SEAL) approach to behaviour management and relationships. The SEAL materials (see: www.teachernet.org or www.bandapilot.org) have been effective for delivering many of the 'self-management', 'effective participation' and 'teamworkers' aspects of the competency curriculum.

Approaches to delivering PLTS

If these curriculum changes are combined with a rigorous behaviour policy that focuses on choosing to learn and an active student voice programme that encourages a sense of ownership, enterprise and responsibility, the possibilities of engaging students in a learning culture becomes much more likely.

If we supplement this by teaching the habits of EI like persistence, optimism and self-management across the curriculum as

Neuroscience issues

- Power of the brain to grow intelligence
- Learning styles and preferences – and how to develop them
- How to control thinking and use internal dialogue for motivation
- The three-part brain (McClean, 1990) and how important the emotional brain is for learning and how a reptilian brain state can create anxiety or anger
- The importance of goals and deferred gratification
- The nature of multiple intelligence and how to develop transferable skills
- Why successful learning behaviours are like habits that we need to practice and take responsibility for developing throughout life
- The value of enrichment programmes

suggested by the SEAL initiative, then we are achieving the essential shift needed. This applies the research evidence of brainfriendly ways to learn - active participation, variety and challenge and emotional involvement, which combine to make learning exciting but demanding. It's the way we are wired!

A crucial aspect of this new pedagogy is metacognition – reflective practice. Constant reflection about learning and how and why it works is part of a competency-based curriculum. It is through this reflection that progress is assessed, reviewed and understood. Tutors can explicitly challenge pupils to reflect on their learning in traditional enrichment activities and in cross-curricular, team-based, extended learning projects.

The school environment will also need to reflect the need for flexible approaches that create individualised learning opportunities and provide a safe and inspiring backdrop to learning experiences. This flexibility would need to extend to the timetable, the school terms and the classrooms.

Possible T&L approaches for delivering PLTS include those listed in the box top left on page 5.

Learning outside of school

The PLTS model also allows students' learning at home to be valued and celebrated and for it to become part of the evolution from schooling to lifelong learning. You could give pupils an extended learning credit sheet to complete where they record as many different learning activities as possible that they do out of school, from activities in the home such as gardening and helping neighbours, hobbies and sports such as keeping fit and playing chess, technology activities such as

Embedding PLTS

Curriculum	Innovation	Abandon
	<ul style="list-style-type: none"> ● Competency-based curriculum for Year 7 and 8 based on cross-curricular projects mapped against PLTS delivering national curriculum content ● Encourage transference of PLTS across the curriculum through skills audit and the use of competency and content objectives ● Embed communication skills including literacy and numeracy in cross-curricular projects ● Graduate on to GCSE courses in Year 9 when PLTS developed. ● Introduce courses and qualifications that develop the PLTS such as the diplomas, Asdan, the extended project, International Baccalaureate, citizenship, communications, functional skills 	<ul style="list-style-type: none"> ● Up to 14 separate subjects from Year 7 delivered for one hour or more a week by 14 different teachers ● The compartmentalisation of the curriculum in secondary schools, which can restrict the ability to transfer skills and competences and impede the embedding of learning ● Attempts to manage literacy and numeracy across the curriculum in secondary schools with paid posts ● Pupils grouped by age rather than stage of learning ● Up to 12 GCSE subjects taken that are not relevant for future employment or training
Timetables	<ul style="list-style-type: none"> ● Flexible timetables with longer blocks of time for project or themed work 	<ul style="list-style-type: none"> ● Fixed timetables divided into up to one-hour periods from 9–4pm
Homework	<ul style="list-style-type: none"> ● Build in enrichment days or weeks as fraction of PLTS development for all age groups 	<ul style="list-style-type: none"> ● Homework as an unrelated extra
Assessment	<ul style="list-style-type: none"> ● Extended home-learning tasks that are assessed through PLTS ● Tracking achievement in PLTS using learner log for continuous assessment of PLTS to record progress in lessons or projects. ● Rigorous student-led assessment for learning through KS2/3/4 using data available and tracking tools to target underachievers ● Develop an e-portfolio of achievements and competences in KS2-KS5 to include extra-curricular activities and levels of attainment in a variety of subjects with a diploma awarded 	<ul style="list-style-type: none"> ● Summative testing and school league tables ● Level 2 qualifications taken at 16 with no accreditation for extra-curricular achievements
Engaging learners	<ul style="list-style-type: none"> ● Establish the ethos and belief in all schools that intelligence can be learned and that there are a variety of ways to be clever ● Train teachers to be aware of optimal environmental conditions for learning: stress-free, praise focused and creatively challenging ● Train students to take responsibility for their own learning through an understanding of how to learn and having responsibility for their learning ● Use AfL and peer/self-assessment techniques to give students a true understanding of how to progress ● Create a learning environment that works with the brain in mind and facilitates peripheral learning ● Use novelty, variety, humour, colour, challenge and music, which all appeal to the emotional brain, and have clear, consistent, high expectations to motivate students ● Create positive relationships using a behaviour policy that describes what you want and applies sanctions consistently ● Underpin all lessons with the development of emotional intelligence to include persistence, self-awareness, self-management, optimism and deferred gratification to produce resilient learners 	<ul style="list-style-type: none"> ● Notions of fixed IQ ● Controlling rather than motivating classrooms ● Students expecting to be entertained and spoon fed for the exam ● Summative grades that neither motivate nor assist progress in learning ● Classrooms built for chalk and talk with the teacher as the fount of all knowledge talking at the students ● Inconsistent delivery of boring subject content through working from textbooks or copying from the board ● The tolerance of bad behaviour that impacts on the learning opportunities for others ● The notion that exists among some students and parents that students can achieve without determination and hard work
Pedagogy for outstanding learning	<ul style="list-style-type: none"> ● Reflective learning by teachers and students leading to regular metacognition ● Active learning ● Effective team-working ● Students able to ask good questions and use sources from the internet effectively ● Students designing some of their learning and setting their success criteria ● Students talking (on task) more than teachers ● Philosophical approach through a community of enquiry ● Assessment for learning as a fundamental part of all lessons ● Language for learning used by teachers and students ● Self-motivated learners who can talk about their progress in PLTS ● Mistakes seen as learning experiences ● Enterprise 	<ul style="list-style-type: none"> ● Didactic teaching with students spending most of the time listening to the teacher ● Focus on copying from books or board ● Teachers 'towing' students through the tests and coursework tasks at KS2/3/4

Possible pedagogy for delivering PLTS

- Teacher as facilitator, coach and expert on tap
- Student-centred activity
- Students construct questions/challenges
- Students as co-designers of learning
- Students judge success, self-correcting and supporting peer learning
- Creative opportunities and challenges
- Success and failure are seen as equal partners for learning
- Time for reflection through metacognition
- Clear development of habits/dispositions for learning
- Students and teachers use a language for learning
- Learning and progress is assessed and recorded in a variety of ways throughout by teacher and students
- Learning is collaborative
- Lots of quality talking and presenting by students to each other

downloading music and creating websites, and other activities such as charity work and car-boot sales. They then assign points to each activity based on the level of challenge involved. They could also be encouraged to identify the PLTS developed – see the examples in the box below.

Memorable learning events

Many schools are choosing to run cross-curricular days or weeks, or subject immersion events that are active, engaging and focused around developing the PLTS. Enterprise Days or Learning Discovery weeks can tap into the interests of staff and students to run extended projects on everything from rocket making to survival courses to choreographing an African dance. This is a tempting alternative to more fundamental changes to the curriculum such as merging subjects as in an Opening Minds approach. The value and enjoyment in these events is clear to everyone; what is less clear is how we can be sure that we can show

progress and capture the evidence for future learning. Could a PLTS e-portfolio help us record the outcomes of these events?

Achieving progression

There are many courses and qualifications now available for KS4 and 5 that further develop the PLTS, including the new diplomas, which incorporate them into their assessment objectives. All subjects can incorporate the PLTS into their delivery. To ensure progression, the curriculum offers a range of courses that offer personal challenges to students to develop the PLTS).

Assessing PLTS

The national curriculum gave us a body of knowledge to deliver and then assess. However, one of the challenges for schools in delivering the PLTS is that it is much easier to assess the delivery of content than ways of thinking. The ultimate measure of success will be to assess how far we have developed independent, resilient learners.

Embedding formative assessment for learning will help pupils track their own progress through learning programmes centred on the development of competences, rigorously moderated by teachers.

Paul Black and Dylan Wiliam demonstrated the double impact of AfL:

It improves scores in national tests and examinations as well as metacognitive skills, including the capacity to learn how to learn. Techniques such as open questioning, sharing learning objectives and success criteria, and focused marking have a powerful effect on the extent to which learners are enabled to take an active role in their learning. (Bransford et al, 2000)

Tracking the development of the PLTS at lesson level will necessitate implementing the new pedagogy that Ofsted requires for 'outstanding' teaching (set out in the protected inspectors evaluation schedule, see: www.ofsted.gov.uk). Setting objectives for PLTS, as well as content, will require teachers to build a competency focus into lessons. The consequence of this will be a need to raise awareness of methods for delivering

Benefits of electronic record

- Opportunities to self-, peer- and teacher assess progress in the PLTS
- A chance to record PLTS across subjects, at home and in enrichment activities
- A storage area for evidence such as written work, PowerPoint presentations, photos, video clips that show progress
- An exciting interactive virtual environment where students self set targets and have easy access to coaching points to help them improve
- A chance to compare work with others for moderation purposes

progress in the PLTS. This could be achieved by tracker packs or learning passports where pupils keep written records of their learning experiences linked into PLTS descriptors. For example, for reflective learners, they could be asked to track where their competence level is at using descriptors such as:

- Bronze level: 'I am a kinaesthetic learner so find listening very hard'
- Silver level: 'I am learning to use my brain in various ways'
- Gold level: 'I believe I can learn to be more clever if I work hard enough'.

Using this type of record in the classroom, students can transfer outcomes into an e-portfolio at given points as part of their PSHE programme.

An electronic record of the PLTS brings a range of benefits – see the box above. The PLTS e-portfolio should enable students to track their progress and build a record of achievement that students can take with them for life. This interactive electronic profile can be used to assess progress, store evidence, coach towards improvement and share resources within your school's virtual learning environment (VLE). Personal tutors can help students record progress in all their subjects as well as all their enrichment activities at home and at school, so that these skills become transferable between subjects, home and work.

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Crediting extended learning

Examples	Commentary	PLTS developed	Points
Cooked an omelette	Never cooked before so got advice. Mixed up eggs and milk, added salt and pepper. Melted butter in pan but it got a bit stuck. Added some raisins for variety!	Independent enquiry Effective participation Creative thinking	5 points
Army Cadets	Went as usual and learned to march	Teamwork Self-management	3 points
Facebook	Found out how to write on my wall and download pic	Independent enquiry Creative thinking Reflective learning	3 points

commendations are awarded for excellence and effort in the development of PLTS as well as in subjects.

Reporting on progress

We report to parents on their child's skills development as well as their attainment and progress in subject specific learning. Again, we have experimented with a variety of reporting formats. In all areas of the Year 7 curriculum, we report on attainment and progress in PLTS. We have used both 'levels' and RAG (Red, Amber, Green). Whatever the reporting format, we know that it is critical that we explain to parents what our expectations are with regard to their child's development in PLTS as well as what progress means. Although we maintain that the development of each student's PLTS is our central focus, not their development in comparison with their peers, what our parents tell us that

they want is comparative local and national data that makes our assessment meaningful to them.

Challenges and future plans

The majority of the challenges we have faced have not been specific to PLTS. Many have been as a result of restructuring our curriculum to place PLTS at the heart of it: securing parental understanding and confidence; rooming; leadership and management of an integrated curriculum; time for planning and reflection. The overwhelming majority of the rest of the challenges have been those that all curriculum managers and team leaders face, whether teaching a conventional curriculum or otherwise: achieving consistency of practice and continuing development of teaching expertise. The main challenge specific to our PLTS work is that of tracking learner progress without add-

ing to the already significant burden of assessment but involving learners in understanding what they need to do to make progress. Effective differentiation in PLTS also continues to challenge us.

We will continue our journey to embed PLTS across the curriculum. However, we know that simply mapping PLTS into existing schemes of work is never enough. Expecting expert subject teachers to teach PLTS without support and training will, ultimately, result in inconsistency of practice, the resentment of teachers and the bewilderment of learners. There is little to argue with in the framework; what teachers want is real, practical advice on how PLTS can be developed without compromising subject specific learning.

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Embedding PLTS in whole-school practice

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Assessing progress in PLTS is challenging but with a multifaceted approach at classroom and whole-school level we can create a reflective practitioner culture for teachers and learners that develops great conversations about learning and skills. Our aim is to improve outcomes in exams through the personal, learning and thinking skills curriculum – and create caring, happy, motivated adults who will thrive in the workplace.

Top 10 essentials for embedding PLTS

- 1 A clear understanding for staff and pupils of the neuroscience behind the PLTS
- 2 A curriculum that embraces the PLTS
- 3 A variety of extra enriched learning experiences linked to PLTS
- 4 PLTS lesson objectives for all subjects
- 5 Active collaborative learning pedagogy
- 6 AfL embedded in the classroom
7. PLTS for staff as part of their own professional development
- 8 Environment that teaches about PLTS
- 9 Home-school learning to link to the PLTS
10. Robust assessment and tracking of the PLTS linking tutors, teachers, parents and students through an e-portfolio

Leadership for PLTS

An open transparent leadership team can provide the role models of emotional intelligence – optimism, empathy, self-awareness, an openness to learning from mistakes – that will really embed the PLTS for all staff. All staff having their own e-portfolio for the PLTS puts the workplace skills agenda at the heart of whole-school development – where it should be.

About learning from Demos (Hargreaves et al, 2004) assessed how successfully theories of learning to learn had been applied in schools and identified characteristics for success. The same characteristics could also be used to embed PLTS whole school.

When embedding PLTS for success there are key areas of innovation you need to consider, and aspects you can think about abandoning, if appropriate – see the box on page 4.

Top 10 essentials for embedding PLTS successfully are given in the box left.

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