Professionalism and pedagogy

A contemporary opportunity

A Commentary by the Teaching and Learning Research Programme
and the General Teaching Council for England

Preface

Pedagogy is both the means of enhancing student learning and the source of teachers' professional identity. As professionals, teachers use expert judgement to recognise and resolve the dilemmas in teaching and learning which they face every day in the classroom. At their best, teachers are also able to reflect on and evaluate their practices, and to make rationally and ethically defensible judgements that go beyond compliance, pragmatic constraints or ideological preferences.

This Commentary offers a pedagogic rationale and a conceptual framework as contributions to the development of a more precise understanding of teacher expertise. It is also a step towards the establishment of a shared professional language. The framework is presented to open up debate – it is not intended as a tick list of prescription or as an accountability tool, rather as a support for professional thinking and discussion.

The conceptual framework aspires to holistically represent the major dimensions of teacher expertise. Additionally, it celebrates teacher expertise, for the truth is that, whilst the framework is complex, teachers work and succeed within its terrain all the time.

The contemporary challenge is to identify this expertise more explicitly and to find ways of representing it more clearly. If this can be done, the profession may become more self-confident as well as more effective. The public may become even more appreciative of the skills, knowledge, understanding and moral commitment which good teachers embody.

The General Teaching Council for England (GTCE) and ESRC's Teaching and Learning Research Programme (TLRP) have been working together since 2008 to articulate more specifically the ways in which professionalism is founded in pedagogic development. A great deal of evidence has been reviewed and consultation with practitioners and researchers in the UK and overseas has been extensive. The GTCE and TLRP believe that the ideas in the Commentary will contribute to systemic sustainable improvements in teaching and learning – and comment upon it is invited.

This document is also timely. Whilst this is an era of financial stringency, future policy developments are expected to increase the scope for the exercise of professional judgement within the education system. We feel sure that teachers will rise to this challenge.

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This Commentary is dedicated to the memory of Donald McIntyre (1937-2007)

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ACKNOWLEDGEMENTS

Evidence is accumulating from around the world that the single most significant means of improving the performance of national educational systems is through excellent teaching (e.g.: Barber & Mourshed, 2007; OECD, 2005). The quality of pedagogy, of what teachers actually do, is thus firmly on the contemporary agenda. Since the UK already has a qualified and trained teaching workforce, relatively modest investment in supporting teachers' professionalism could be very cost-effective. There is both a need and an excellent opportunity for the profession to demonstrate and strengthen its expertise and to improve its status in the public mind.

The relative lack of reference to pedagogy in educational discussion in the UK, compared with practice in many other successful countries, has been the focus of academic debate for the best part of thirty years. The concern was first raised by Brian Simon's 1981 paper, *Why no pedagogy in England?* and was further developed by Robin Alexander (2004) in his response to the Government's 2003 Primary Strategy, *Still no pedagogy?*

In a world-class educational workforce – Finland might be used as an example – teachers are the ones who initiate discussions about pedagogy, and then evaluate and critique the ideas they develop. This 'pedagogic discourse' aspires to be explicitly grounded in the scrutiny of ideas, theories, ethical values and empirical evidence. It goes well beyond simplified prescription, for instance of 'what works', and supersedes reliance on centrally-imposed performance targets. In their place is greater trust in teachers' capacity for self-improvement as an inherent element of their professional identity. However, this trust has to be earned – hence the focus in this Commentary on the nature of pedagogic expertise.

The GTCE is keen to stimulate a debate with teachers and other partners on developing a shared pedagogical language for teaching. Indeed, we believe that teachers should be the main creators of professional knowledge as the basis of their practice.

Our work in this area, as the professional body for teaching, originates from the GTCE's remit to contribute to improving standards of teaching and the quality of learning in the public interest. We therefore have a role in strengthening teacher professionalism, a theme which we have developed through our Corporate Plan for 2009-12, *Teaching in 2012*.

In addition, the Code of Conduct and Practice for registered teachers, developed by the GTCE with teachers and others, sets out a professional expectation for registered teachers that they will: 'make use of research about teaching and learning' and 'actively seek out opportunities to develop their knowledge, understanding, skills and practice' (from principle 2, GTCE 2009).

In 2007 the GTCE began collaboration with Donald McIntyre, then Professor of Education at the University of Cambridge, on a BERA Review of pedagogy and professional practice. Very sadly, he died before completing the work. Facilitated by Lesley Saunders, then GTCE's Senior Policy Adviser for Research, the task was then taken up by the ESRC's Teaching and Learning Research Programme, led by its Director, Andrew Pollard – hence the present TLRP Commentary and associated web resources which have been produced as a GTCE-TLRP collaboration.

Teaching is a professional activity underpinned by qualifications, standards and accountabilities. It is characterised by complex specialist knowledge and expertise-in-action. In liberal democratic societies, it also embodies particular kinds of values, to do with furthering individual and social development, fulfilment and emancipation.

'Pedagogy' is the practice of teaching framed and informed by a shared and structured body of knowledge. This knowledge comprises experience, evidence, understanding moral purpose and shared transparent values. It is by virtue of progressively acquiring such knowledge and mastering the expertise – through initial training, continuing development, reflection and classroom inquiry and regulated practice – that teachers are entitled to be treated as professionals. Teachers should be able and willing to scrutinise and evaluate their own and others' practice in the light of relevant theories, values and evidence. They should be able to make professional judgements which go beyond pragmatic constraints and ideological concerns, and which can be explained and defended.

Furthermore, pedagogy is impoverished if it is disconnected from the capacity and responsibility to engage in curriculum development and to deploy a range of appropriate assessment methodologies. Indeed, in most European countries, these elements are treated as a whole, enabling a broad conception of pedagogy. Teachers should be knowledgeable about curriculum and assessment principles as a part of their pedagogical expertise. To promote the further development of professional expertise in the UK, we have included these dimensions, and the interrelationships between them, in the conceptual framework later in the Commentary.
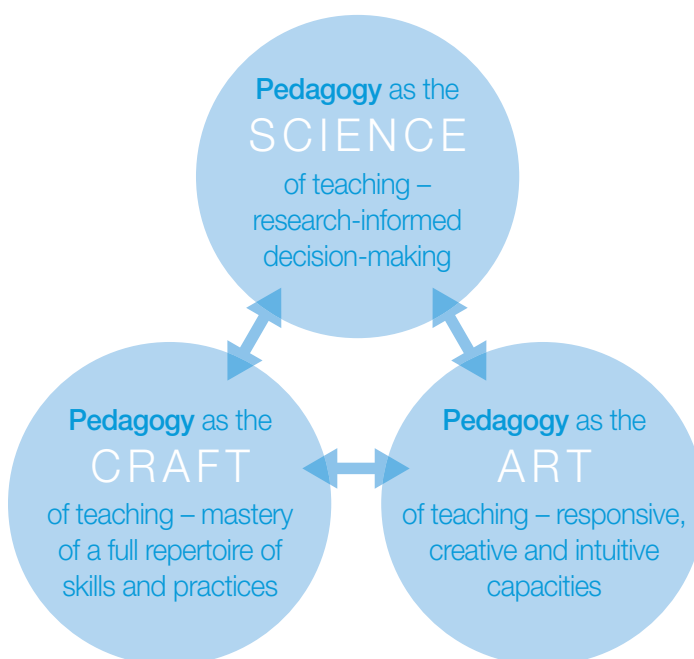
Pedagogic expertise can be thought of as a combination of science, craft and art *(see diagram)*; this notion helps us to understand the complementary needs for collectively created knowledge, professional skills and personal capacities. It is also important to remember that all these are grounded in ethical principles and moral commitment – teaching is never simply an instrumental activity, a question just of technique.

One of the challenges for pedagogical discourse is to distinguish between what is known in a scientific sense of being explicit, cumulative and generalisable, and what are the irreducibly intuitive and creative elements of teaching.

It is generally accepted now that good teaching requires strategic decisions informed by evidence. But it also requires a large number of implicit and often instantaneous judgements and decisions. These are responses to the dynamic situation in the classroom, often shaped by the 'community of practice' to which the teacher belongs. They are also expressions of each teacher's individual relationship with his or her pupils: how s/he generates a positive classroom climate or takes advantage of unexpected teaching and learning opportunities. This is the 'craft' and the 'art' of teaching.

And we all need to acknowledge this paradox of teaching – that the more expert a teacher becomes, the more his/her expertise is manifested in sensitivity to contexts and situations, in imaginative judgements in-the-moment sourced from tacit knowledge. The importance of these forms of expertise is often underestimated. Indeed, they often become so embedded, instinctive and taken-for-granted that they are barely recognised.

Pedagogy as the
SCIENCE
of teaching –
research-informed
decision-making

Pedagogy as the
CRAFT
of teaching – mastery
of a full repertoire of
skills and practices

Pedagogy as the
ART
of teaching – responsive,
creative and intuitive
capacities

Such behaviours need to be analysed and discussed, so that the profession can become more confident about its expert practice, its professionalism. The development of a conceptual framework for the discussion of pedagogy in this Commentary is a contribution to that goal.

The GTCE believes that in the future teaching needs to be based on the development of a pedagogic discourse that arises from teachers sharing and scrutinising the practices and kinds of knowledge which they build, and the values in which these are rooted. The issue is not about theorising about practice since many teachers naturally do this. It is more about whether:

> *'The theories they espouse…have been justified and developed by being exposed to the critical scrutiny of other practitioners, whether they are based on a consideration of evidence from research…whether they have been interrogated in terms of the values and assumptions on which they are based'* (Furlong, 2000, page 13).

This integration of theory, practice and values into a discourse of pedagogy would mean amongst other things:

- strengthening the shared professional language for talking about teaching, learning and children so that it can stand up to scrutiny in terms of argument, evidence and espoused values;
- developing communities of 'warranted' practice (discussed on the next page) which contribute to the development of this language in dynamic ways; and
- enabling teachers to present their theories, practices and language in more confident and accessible ways.

Such an undertaking needs to be viewed in the context of the commitment within the 2009 DCSF White Paper, *Your Child, Your Schools, Our Future*, 'to lead a debate on world-class pedagogy', initially in conjunction with the 'social partners' (teaching workforce organisations and the TDA and NCSL).

With the support of the TLRP and others, the GTCE is keen to contribute to this debate through the work that it has already developed with teachers during 2010.

We have to start from where we are. In relation to public understanding of teachers' work, this poses a problem because, despite what research now tells us about effective teaching and learning, the most common perception is that teaching simply involves maintaining discipline and imparting knowledge. This 'transmission model', in which the teacher teaches and the pupil learns, can often be found underlying press reports – and it lurks in many other places too.

On behalf of the children and young people in our schools and colleges, we have to do better. But if we are to try, how do we build trust and confidence in those efforts? How can parents, school governors, employers and policy makers be assured that our professional knowledge, skills, understanding and judgements are well founded and should be supported?

Can our approach to teaching and learning be fully justified to others?

The idea of 'warranted pedagogy' may seem a little strange at first but it has an important role to play in enhancing the public esteem of teachers. If the profession is to be trusted – with less central direction by government agencies and more local decision-making – then it has to be able to demonstrate the nature of its professionalism.

In this Commentary it is suggested that three elements of justification are required:

1 a valid educational rationale based on evidence-informed principles: see this page and page 8;
2 effective implementation and commitment to continuing improvement: see page 9; and
3 clear explanations of pedagogic strategies in use: see pages 11-29.

A valid educational rationale

TLRP distilled findings from its 22 school-based research projects, trawled international research and consulted widely with practitioners to produce its 'Ten Principles of Effective Teaching and Learning' (James and Pollard, 2006). These principles, which appear on the next page, are an attempt to provide a holistic picture of factors that enhance learning.

The principles are intended to inform professional judgement rather than dictate any particular course of action. Whilst the statements may seem straightforward, they do have a cutting edge. The test is to use them to challenge actual practice or policy. When that is done, there is often a gap between what is aspired for and what it is possible to achieve. This gives pause for thought, and can lead to new insights and development.

The present Commentary builds on these principles but focuses on the conceptual understanding through which they are explored and enacted by expert teachers.

Of course, such representations are not new. For example, in 1990, the American Psychological Association offered an evidence-informed account of 'learner-centred psychological principles' - and these can still be viewed at: www.apa.org/ed/governance/bea/learner-centered.pdf. From New Zealand, John Hattie's meta-analysis of 800 studies of effective methods of teaching (see Hattie 2009) is another landmark publication drawing on research evidence – and its Teaching and Learning Research Initiative (see www.tlri.org.nz) is an explicit attempt to build knowledge about effective teaching by combining research and practitioner expertise. Over the past decade, TLRP has been part of such discussions in many parts of the world (see www.tlrp.org/international).

10 Demands consistent policy frameworks with support for teaching and learning as their primary focus

Policies at national, local and institutional levels need to recognise the fundamental importance of teaching and learning. They should be designed to make sure everyone has access to learning enviroments in which they can thrive.

1 Equips learners for life in its broadest sense

Learning should aim to help people to develop the intellectual, personal and social resources that will enable them to participate as active citizens and workers and to flourish as individuals in a diverse and changing society. This implies a broad view of learning outcomes and that equity and social justice are taken seriously

9 Depends on teacher learning

The importance of teachers learning continuously in order to develop thier knowledge and skills, and adapt and develop thier roles, especially through classroom inquiry, should be recognised and supported.

2 Engages with valued forms of knowledge

Teaching and learning should engage with the big ideas, facts, processes, language and narratives of subjects so that learners understand what constitutes quality and standards in particular disciplines.

8 Recognises the significance of informal learning

Informal learning, such as learning out of school, should be recognised as being at least as significant as formal learning and should be valued and used appropriately in formal processes.

3 Recognises the importance of prior experience and learning

Teaching should take account of what learners know already in order to plan their next steps. This means building on prior learning as well as taking account of the personal and cultural experiences of different groups.

7 Fosters both individual and social processes and outcomes

Learning is a social activity. Learners should be encouraged to work with others, to share ideas and to build knowledge together. Consulting learners and giving them a voice is both an expectation and a right.

4 Requires the teacher to scaffold learning

Teachers should provide activities which support learners as they move forward, not just intellectually, but also socially and emotionally, so that once these supports are removed, the learning is secure.

6 Promotes the active engagement of the learner

A chief goal of teaching and learning should be the promotion of learners' independence and autonomy. This involves acquiring a repertoire of learning strategies and practices, developing a positive attitude towards learning, and confidence in oneself as a good learner

5 Needs assessment to be congruent with learning

Assessment should help to advance learning as well as to determine whether learning has taken place. It should be designed and carried out so that it measures learning outcomes in a dependable way and also provides feedback for future learning

# TLRP's ten principles of effective teaching and learning

Implementation and continuing improvement

As inspection reports attest, the overall quality of teaching in UK schools is of a high standard. And we know too the strength of teachers' professional commitment, despite often challenging circumstances.

The essence of such professionalism can be seen as the exercise of skills, knowledge and judgement for the public good. However, the question quickly arises about how such commitment and expertise is to be developed, maintained and renewed. This is where reflective practice comes in.

The notion of reflective thinking goes back to Dewey who, in the 1930s, contrasted it with routinised thinking. Since then, the idea has been developed by many others, particularly in relation to professionalism (Schon, 1983). For school education, the proposition has been expressed as illustrated below (Pollard, 2008).

PROBLEM
↓
ISSUES
↓
DILEMMAS ← EVIDENCE
↓
JUDGEMENT
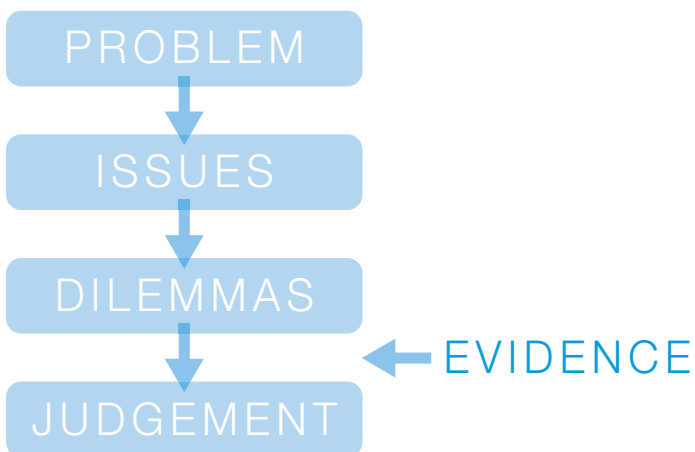
So, a teacher experiences a routine classroom problem – perhaps students appear unsettled, and they don't seem able to grasp a particular point. When analysed, there are invariably deeper issues underlying such problems. Maybe the curriculum is uninteresting, an explanation has been rushed or the teacher is a bit uncertain about some aspect of subject knowledge. Such possibilities must be evaluated, sometimes almost instantaneously, and potential courses of action then present themselves. What to do? These are the dilemmas which every teacher faces in classroom action.

A decision must be taken. To resolve such dilemmas on the spot, one has to exercise judgement.

The value of reflective activity is that it can improve the quality of such judgements. Occasionally, when it seems valuable to do so, teachers can investigate commonly recurring issues in a systematic and open-minded way. Perhaps other colleagues join in a collaborative enquiry. Such enquiries are sometimes called 'action research' or 'lesson study' and are tried and tested ways of improving pedagogic awareness. In all cases, evidence is introduced and used to stimulate reflective analysis of the issues. This evidence could come from many sources – from reading published research, from comparing experiences with colleagues, from external measures of pupil performance, from empirical enquiry in one's own classroom. The important thing though, is to use such evidence to improve the quality of professional judgement. This assures the effective implementation of educational principles and the provision of continuing professional development.

Of course, there are also many other forms of continuing professional development which can help teachers to implement principles in the classroom. The GTCE-led Teacher Learning Academy is a prime example of an enabling network. The English TDA's new Masters in Teaching and Learning is intended to support pedagogic development through coaching. GTCW is exploring a Chartered Teacher scheme to match the long established provision from GTCS. Meanwhile, GTCNI leads the UK in its articulation of teaching as a 'Reflective Profession'.

Clear explanation of pedagogic strategies

Given the existence of principled and reflective classroom practice, it should be relatively straightforward to explain and justify this to others. And yet this is often not the case. As discussed earlier in this Commentary, much teacher knowledge and understanding is implicit and tacit.

We therefore need to highlight, describe and celebrate this expertise. One way of doing this is through the development of a framework of concepts which can be used to more explicitly describe warranted practice.

Building a conceptual framework
Andrew Pollard

How is it possible to identify a set of concepts to explain something as complex as classroom practice?

When Lesley Saunders and I first explored the UK and international literature on pedagogy and teaching methods, we found a huge but disparate collection of 'big ideas' about teaching and learning in classrooms. We consulted practitioners extensively through the GTCE Networks and elsewhere. Various research studies of teacher thinking and discourse were reviewed and ideas were collected, presented and discussed at international academic events. To begin with then, we had a complex mass of words used when talking about pedagogy – many of which also embraced issues in curriculum and assessment.

Initial attempts to analyse this collection were not very productive. However, a breakthrough came when we focused on the relatively stable set of concepts which are often used to discuss curriculum design – for example, breadth, balance, relevance, differentiation, progression. Interestingly, these were all promoted in a 1985 HMI publication, *The Curriculum from 5 to 16*. How had they stood the test of time so well? Could they be related to contemporary vocabulary on pedagogy and assessment?

Patterns began to emerge. In particular, there seemed to be a number of enduring educational issues to which these long-lasting concepts relate – those concerning the **aims**, **contexts**, **processes** and **outcomes** of education. We felt this was an important insight, because it began to describe the 'epistemological work' (contribution to knowledge) which such concepts must carry out.

This Commentary is thus based on the idea that concepts concerning **curriculum**, **pedagogy** and **assessment** can be organised through the 'work' which they do in enabling discussion and understanding of enduring classroom issues. Perhaps, we reasoned, making this logic explicit could enable progress towards a more robust and sustainable conceptual framework for the professional expertise of teaching.

The facing page presents the conceptual framework which has evolved, so far, from this proposition.

The conceptual framework may seem daunting at first because it attempts to represent teacher expertise in a holistic way – and we know that this is complex and multi-faceted. To simplify, our argument is that, in one way or another, teachers inevitably face issues concerning **educational aims**, **learning contexts**, **classroom processes** and **learning outcomes** (the rows) and they do so in relation to **curriculum**, **pedagogy** and **assessment** (the columns).

The questions in each cell demonstrate the high levels of reflective expertise which teachers need and, as we have seen, this calls for evidence-informed professional judgement. However, the analytic capacity of the concepts which are used to think about and discuss such evidence is also absolutely vital. Without such generative power, neither classroom enquiry nor discussion with colleagues will build sustainable professional understanding.

There is one further assumption behind the way this representation of conceptual tools has been developed which I need to make explicit – that we are concerned with the provision of some form of 'good education'. In other words, the ideas in this Commentary are informed by particular educational values and by available evidence about 'good education'. The specific meaning and usage of the identified concepts can thus certainly be challenged. The framework is tentative and it could, and perhaps should, be compiled and re-presented in different ways. The task is difficult – and this very fact confirms the contested nature of education.

The columns of curriculum, pedagogy and assessment are an important way of reviewing the framework, but it is also worthwhile to think of the rows – as is done in the remainder of the Commentary – or to explore interconnections between cells, and linkages across the conceptual framework. *The framework is simply a tool for thinking and for discussion, to be used as readers see fit*. The remainder of the Commentary explains each part and illustrates its use.

ENDURING ISSUES	CURRICULAR CONCEPTS	PEDAGOGIC CONCEPTS	ASSESSMENT CONCEPTS
EDUCATIONAL AIMS			
1. Society's educational goals What vision of 'education' is the provision designed to achieve?	**Breadth:** does the curriculum represent society's educational aspirations for its citizens?	**Principle:** is the pedagogy consistent with established principles for effective teaching and learning?	**Congruence:** are forms of assessment fit-for-purpose in terms of overall educational objectives?
2. Elements of learning What knowledge, concepts, skills, values and attitudes are to be learned in formal education?	**Balance:** does the curriculum-as-experienced offer everything which each learner has a right to expect?	**Repertoire:** is the pedagogic expertise sufficiently creative, skilled and wide-ranging to teach all elements of learning?	**Validity:** in terms of learning, do the forms of assessment used really measure what they are intended to measure?
LEARNING CONTEXTS			
3. Community context Is the educational experience valued and endorsed by parents, community, employers and civil society?	**Connection:** does the curriculum engage with the cultural resources and funds-of-knowledge of families and the community?	**Warrant:** are the teaching strategies evidence-informed, convincing and justifiable to stakeholders?	**Dependability:** are assessment processes understood and accepted as being robust and reliable?
4. Institutional context Does the school promote a common vision to extend educational experiences and inspire learners?	**Coherence:** is there clarity in the purposes, content and organisation of the curriculum and does it provide holistic learning experiences?	**Culture:** does the school support expansive learning by affirming learner contributions, engaging partners and providing attractive opportunities?	**Expectation:** does the school support high staff and student expectations and aspire for excellence?
CLASSROOM PROCESSES			
5. Processes for learners' social needs Does the educational experience build on social relationships, cultural understandings and learner identities?	**Personalisation:** does the curriculum resonate with the social and cultural needs of diverse learners and provide appropriate elements of choice?	**Relationships:** are teacher-pupil relationships nurtured as the foundation of good behaviour, mutual wellbeing and high standards?	**Inclusion:** are all learners treated respectfully and fairly in both formal and informal interaction?
6. Processes for learners' affective needs Does the educational experience take due account of learner views, feelings and characteristics?	**Relevance:** is the curriculum presented in ways which are meaningful to learners and so that it can excite their imagination?	**Engagement:** do the teaching strategies, classroom organisation and consultation enable learners to actively participate in and enjoy their learning?	**Authenticity:** do learners recognise routine processes of assessment and feedback as being of personal value?
7. Processes for learners' cognitive needs Does the educational experience match the learner's cognitive needs and provide appropriate challenge?	**Differentiation:** are curriculum tasks and activities structured appropriately to match the intellectual needs of learners?	**Dialogue:** does teacher-learner talk scaffold understanding to build on existing knowledge and to strengthen dispositions to learn?	**Feedback:** is there a routine flow of constructive, specific, diagnostic feedback from teacher to learners?
LEARNING OUTCOMES			
8. Outcomes for continuing improvement in learning Does the educational experience lead to *development* in knowledge, concepts, skills and attitudes?	**Progression:** does the curriculum-as-delivered provide an appropriate sequence and depth of learning experiences?	**Reflection:** is classroom practice based on incremental, evidence-informed and collaborative improvement strategies?	**Development:** does formative feedback and support enable learners to achieve personal learning goals?
9. Outcomes for certification and the life-course Does the educational experience equip learners for adult and working life, and for an unknown future?	**Effectiveness:** are there improvements in standards, in both basic skills and other areas of curricular attainment, to satisfy society's educational goals?	**Empowerment:** is the pedagogic repertoire successful in enhancing wellbeing, learning disposition, capabilities and agency?	**Consequence:** do assessment outcomes lead towards recognised qualifications and a confident sense of personal identity?

1

Society's goals
What vision of education is the provision designed to achieve?

Keys to unlock the curriculum

Who owns the curriculum? Ministers? Parents? Employers? Teachers? Children? All of them? At one time, there was an almost exclusive focus on the basic skills and bodies of knowledge which needed to be imparted. In the contemporary world, it is appreciated that whilst these remain necessary, they are not sufficient on their own. Broader and more sophisticated approaches to education are needed.

Moving in this direction, UK Governments now aim to foster creativity, personal skills and cross-curricular work through new curricular programmes such as the Creative Curriculum in Wales, England's new Key Stage 3 programmes and the forthcoming primary curriculum based on areas of learning and key skills. Taking this further again, the independent Cambridge Primary Review, whose final report was published in 2009, urged an explicit, aims-led curriculum underpinned by principles such as entitlement, equity and sustainability.

The RSA's Opening Minds initiative is a contemporary example of thinking differently about curriculum building. A broad framework through which schools can teach subject content in a creative and flexible way, it aims to help schools provide young people with real world competencies in Citizenship, Learning, Managing Information, Managing Situations and Relating to People.
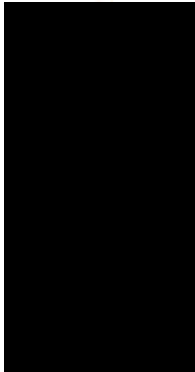
PHOTO REDACTED DUE TO THIRD PARTY RIGHTS OR OTHER LEGAL ISSUES

Northampton Academy started using Opening Minds with its Year 7 and 8s in 2006. Claire Greaves, the school's Opening Minds programme leader, likens the use of a competence based curriculum to "giving children a set of keys, a way to unlock the rest of the curriculum".

The school handbook states: "Opening Minds sprang from a conviction that the way young people are being educated was becoming increasingly distanced from their real needs". The "information driven" National Curriculum was neglecting skills for life, including skills for learning, the ability to manage people and situations well, and good citizenship, it continues. "Opening Minds argues that these life-skills need to be taught directly and specifically. It starts from a competence framework that aims to meet the individual's needs in the personal, social and employment worlds."

Opening Minds is taught for eight hours a week and also incorporates English, humanities and learning competencies. Review and preparation sessions each day help students identify which competencies they have used, and how they could apply them in the next day's learning. Study units weave competencies and content together. Children use a matrix for self-assessment at the end of each project, choosing a statement they consider to reflect what they have achieved, and teachers add feedback.

Aims-led innovation of curriculum, pedagogy and assessment has enormous potential for the future.

Breadth: Real-world competencies are connected to subject content, in ways that are meaningful for students.

Principle: Compared with centralised requirements, Opening Minds promotes a different balance of pedagogic principles.

Congruence: Assessment practices reinforce curricular intentions and educational objectives.

For further details about this case study, see: www.thersa.org/projects/education/opening-minds/opening-minds-school-community/features/northampton-academy

The question, 'What is education for?' is explored further in TLRP's Commentary *Enriching the Experience of Schooling* – a publication by Diane Hofkins in which principles of teaching and learning are compared with government policies. See: www.tlrp.org/pub/commentaries

Breadth: does the curriculum represent society's educational aspirations for its citizens?

Principle: is the pedagogy consistent with established principles for effective teaching and learning?

Congruence: are forms of assessment fit-for-purpose in terms of overall educational objectives?

13

Society's educational goals

Education connects our past to the future – but exactly what happens is worked out through debate and action in the present.

Children and young people are our most precious asset. They come to embody our culture and their values and capabilities will determine the ways in which our economy and society will evolve over the 21st century. Education both reflects society and contributes to it. Issues such as whether education reproduces social differences or provides new opportunities thus become very important. What vision of education should we adopt?

The Education Reform Act 1988 specified official educational aims for England and Wales. Children are to be offered a 'balanced and broadly based curriculum' which:

- promotes the spiritual, moral, cultural, mental and physical development of pupils; and
- prepares pupils for the opportunities, responsibilities and experiences of adult life.

The law thus formally enshrines a rounded conception of education. However, pressure for short-term performance tends to narrow such goals – and here we have a major issue of the last decade. The curriculum frameworks for Scotland, Wales and Northern Ireland promote similarly broad overall aims.

BREADTH

There are many views about the areas of learning and experience which should be provided by schools. Scotland's *Curriculum for Excellence* proposes eight areas, as does Northern Ireland's new curriculum. These encompass fields such as: arts and creativity; language and literacy; environment and society; modern languages; mathematics; science and technology; health and physical education; religious and moral education.

In England, very particular emphasis has been given to core subject areas of Literacy and Numeracy. Maintaining breadth in pupils' actual classroom experiences is a big challenge for teachers in any event, and is made even more difficult in such circumstances. Recent curriculum reviews (eg: Rose, 2009) may mitigate this, but curriculum and assessment need to be fully aligned to reinforce breadth of provision.

PRINCIPLE

This challenge concerns the extent to which teacher judgement is informed by deep understanding of learning and teaching and of the factors involved. TLRP's Ten Principles (see page 8) is one way of representing these factors holistically so that their interconnectedness is emphasised. Such principles often underpin national recommendations but, at best, they should directly inform teacher expertise.

The principles form four natural groups. The first group includes educational goals, knowledge to be learned and the prior experience of the learner. Three aspects of teacher expertise, in 'scaffolding' learning, assessment for learning and active engagement, form another. The role of social processes and informal learning feature next. Finally, the principles emphasise the significance of teacher learning and the need for consistent policy frameworks.

CONGRUENCE

TLRP's project on learning environments (Entwistle, 2009) studied ways in which assessment activity is aligned with learning objectives, appropriate for student backgrounds and fully supported institutionally. Assessment was thus seen as being much more than a narrow technical process, but woven into educational organisations, subjects and their practices. Such congruence supports learning because the learner can more easily understand and engage with available feedback if their experiences are consistent. This work built on the concept of 'constructive alignment' (Biggs, 2007).

In recent years, England's focus on English and Mathematics through National Strategies, high-stakes assessment and school inspection made it difficult to provide a broad curriculum experience for pupils – the alignment between espoused educational goals and actual provision was weak. Indeed, the existence of national testing in England at Key Stage 2 remains controversial for this reason. But can such powerful influences be used more positively? TLRP's assessment Commentary is full of suggestions (Mansell et al, 2009).

2

Elements of learning
What knowledge, concepts, skills and attitudes
are to be learned in formal education?

Bringing the curriculum to life

Year 4 teacher Simon Mills took out a tube of sugar-coated chocolate buttons and told the children he was being short-changed. He was certain there were not as many buttons of his favourite colour as the others. Could the children help find out if this was true?

The lesson in data handling had begun and the children were instantly engaged. They worked in groups at their computers, filling in a spread sheet as they counted sweets, and discussing how to solve the problem. Everyone was keen to share their ideas and hear what other people had to say.

The lesson was filmed at Teyfant Infants in Bristol, to illustrate the TLRP principle 'Teachers should scaffold learning in appropriate ways' – something which demands a confident teaching repertoire. The school was involved in the TLRP's InterActive project, which found that ICT in the classroom will not automatically bring improvements in learning; teachers and children need to choose and use technological tools appropriately.

"One thing I think very carefully about is what tool I'm going to use," says Simon. "I sit down and think, 'am I going to use this book or that book?' 'How do I demonstrate what a full stop is and what a capital letter is?'" For this particular lesson, the questions he asked himself included: am I teaching ICT today or maths? Am I going to use a tool they're familiar with or a new one?

In this case, he wanted to ensure the children could access the maths, so he chose technology that would help them do so quickly. Whichever choice he makes, though, "It's important to use real tools with real outcomes."

Simon likened his job to that of an orchestra conductor, and said it was more important to him to have an agenda than a plan. "It's not a passive role. I'm trying to lead the children toward something. I have got an agenda. I have got an outcome, which is an end point. I know I have got to get there."

Significant numbers of children in our schools find it difficult to access the curriculum and they are attaining at a level below their abilities. Such children may be bored or distracted, unable to concentrate for all sorts of reasons.

However, findings from a number of robust studies featured on the 'Research for Teachers' area of the GTCE website show that teachers like Simon bring the curriculum to life for their students by providing a balanced curriculum, varied learning experiences and valid assessment feedback.

Balance: The lesson offers children different ways to learn and enhances personal, social and academic skills.

Repertoire: The teacher makes informed decisions about strategies for advancing children's learning and keeping them engaged and autonomous.

Validity: The teacher uses assessment for learning in conducting the lesson, giving the children work which takes them towards a clear goal, based on a judgement of where they are at the beginning.

For more information on the TLRP project see: www.tlrp.org/proj/phase11/phase2i.html or Sutherland, R., Robertson, S. and John, P. (2008) *Improving Classroom Learning with ICT* (London, Routledge). The video is available at: www.tlrp.org/pub/videopip.html. The GTCE link is: www.gtce.org.uk/teachers/rft/curriculum0809/curriculumoverview/

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Balance: does the curriculum-as-experienced offer everything which each learner has a right to expect?

Repertoire: is the pedagogic expertise sufficiently creative, skilled and wide-ranging to teach all elements of learning?

Validity: in terms of learning, do the forms of assessment used really measure what they are intended to measure?

15

Elements of learning

Pupils at school acquire knowledge, concepts, skills, values and attitudes, and they do so through their work across the whole curriculum and beyond.

Knowledge and concepts to be learned are often suggested by national curriculum frameworks, and may be complemented by promotion of the skills and disposition of 'learning-how-to-learn'. Some of these elements of learning, such as the basic skills of literacy and numeracy, are typically given priority in the formal curriculum.

Values and attitudes are no less important. Scotland's Curriculum for Excellence is said to be underpinned by the values inscribed on the mace of the Scottish Parliament – wisdom, justice, compassion and integrity. However, the tacit messages that go out from the 'hidden curriculum' of everyday experience may have a particularly direct influence.

Teachers thus have enormous responsibilities not just for the content of what learners may learn, but in contributing to the values and attitudes of our future citizens. Nor can this responsibility be declined, for pupils will develop values and attitudes in any event.

BALANCE	As HMI (1985) put it: 'A balanced curriculum should ensure that each area of learning and experience and each element of learning is given appropriate attention in relation to the others and to the curriculum as a whole'. If areas of learning are organised in terms of subjects, an appropriately balanced allocation of sufficient time and resources is crucial.
	Elements of learning – knowledge, concepts, skills, values and attitudes – are taught *within* each curriculum area and again need to be balanced. Over-emphasis on knowledge or skills sometimes de-motivates learners and should be complemented by support for conceptual understanding and opportunities to develop personal perspectives. Such goals are clearly dependent on having an appropriate pedagogic repertoire.
REPERTOIRE	Educational objectives are wide-ranging and the challenges of factors such as classroom space, pupil organisation, time, task, activity and routine are formidable. A range of teaching approaches is therefore required. Alexander (2008) suggests that three broad aspects of pedagogical repertoire can be identified:
	• *organisational:* whole class teaching, collective group work, collaborative group work, one-to-one activity the teacher, one-to-one activity with peers; • *teaching talk:* through use of rote, recitation, instruction, discussion, dialogue, etc; and • *learning talk* (by pupils): such as narrate, explain, speculate, argue, negotiate, etc.
	To make provision for all elements of learning to be taught through classroom activities and tasks, teachers need to be confident users of a range of pedagogic approaches.
VALIDITY	Assessing things that are easy to measure is not necessarily the same as assessing things which are educationally important – but it is tempting to do so none-the-less. In classrooms for example, it is routine to test forms of pupil performance, but much harder to assess deeper understanding. Learning is not always 'on the surface', so we have to find insightful ways of investigating and analysing.
	In general, it is easier to assess knowledge and skill than it is to assess understanding and attitudes. The former tend to be more amenable to categoric questions and tests. Understanding and attitudes are likely to be revealed more through dialogue, discussion and demonstration and to require teacher interpretation of the available evidence. Again, to draw out these crucial elements of learning in valid way, a confident pedagogic repertoire is needed.

Parents as partners

David and Lucy, 11-year-old twins, were looking forward to their move up to secondary school. David, a sporty, outgoing, but quirky boy, was particularly enthusiastic. His more conformist sister was less keen to leave the comfort of the junior classroom.

But in the event, Lucy thrived and David struggled – he failed to make friends, was bullied, and had to be switched out of his tutor group at the end of Year 7. The twins' parents were unable to provide the support or have the access to school that they had had before, and their mother found this period, and the changes in her children, difficult.

Researchers who followed the twins through their transfer believe a programme from TLRP's Home-School Knowledge Exchange project (HSKE) could have made all the difference. HSKE helped to bridge home and school by valuing the contributions of all parties: parents, children and teachers. Involvement in such a scheme might have enabled David's parents to work with his teachers to help him to develop different coping strategies and to deal with the challenges to his sense of self.

School transfer can challenge children's established identities and force them to reassess who they are and how they interact with others. HSKE enabled parents, teachers and children to engage with this challenge together, and provided a structure that makes it easier for parents to share their knowledge of their children with the school.

One of HSKE's three strands was secondary transfer. Action researchers worked with four primary schools in Bristol and Cardiff and their receiving secondaries on improving children's experience of transfer by bringing schools, parents and children together to share the same learning experiences.

For example, videos of Year 7s, their parents and their teachers talking about secondary school life were shown to Year 6s

and their parents and teachers. Year 6 children made passports of the skills they might need in secondary school. This meant they had to reflect on themselves as individuals, to imagine themselves in the new setting and to offer themselves advice.

When they started at secondary, children brought in photos of their out-of-school lives. Parents were invited to an informal evening with teachers, and one secondary held an event specifically to discover how the knowledge of the Somali community could be drawn on by the school.

The children involved appeared to adjust more quickly to secondary school and to have better attitudes towards learning. They also made significantly greater progress in literacy between Year 6 and Year 7 than other children.

Connection: Home-school knowledge exchange supports curriculum engagement with the real lives of children and parents.

Warrant: Authentic home-school engagement provides opportunities for home knowledge and teacher expertise to be shared and understood.

Dependability: New circumstances may compromise assessment of children's capabilities, but contextual understanding can assist both performance and interpretation.

For more information on the TLRP project, see: www.tlrp.org/proj/phase11/phase2e.html or:www.gtce.org.uk/teachers/rft/home_school0408/. The case-study above is from: Osborn, M, McNess, E, Pollard, A. (2006) Identity and transfer: a new focus for home–school knowledge exchange, *Educational Review* 58 (4) pp 415-33. HSKE worked with a theatre-in-education company, to focus attention on issues surrounding transfer. A video download, 'Ready or Not' is available at: www.tlrp.org/pub/video.html.

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Connection: Does the curriculum engage with the cultural resources and funds-of-knowledge of families and the community?

Warrant: Are the teaching strategies evidence-informed, convincing and justifiable to stakeholders?

Dependablity: Are assessment processes understood and accepted as being robust and reliable?

17

Community context

'Community' is associated with social relationships, cultures and histories and with a collective sense of place and identity.

Some people and families may feel deeply embedded in their communities and benefit from extensive social networks; such social capital often brings status and advantage. Others, perhaps minority groups, may feel more marginal or even excluded. Such diversity is a very strong feature of contemporary life.

In this conceptual framework, 'community' is seen both as a resource to support learning and as denoting stakeholders for accountabilty.

TLRP's research has consistently shown the significance of informal, out-of-school learning. Those in the community can thus be a great support for learning, if constructive and trusting connections are established.

However, those beyond the school gate are also positioned as consumers. Parents, employers, inspectors and others expect children to receive high quality education. Forms of pedagogy and assessment increasingly have to be justified – hence the concepts of warrant and dependability.

CONNECTION

'Only connect – live in fragments no longer', wrote E. M. Forster. This thought can be applied to the meaningfulness and linkage of the curriculum with the communities which each school serves. TLRP's Home-School Knowledge Exchange project affirmed the knowledge of families and devised ways of drawing this into the curriculum. Outcomes in literacy and numeracy improved and transfer between Key Stages 2 and 3 transfer was facilitated (Hughes et al, 2007, 2008).

Taking this idea rather further, the Cambridge Primary Review recommended that 30% of teaching time should be framed by a community curriculum drawing on local organisations, resources and environments. In the secondary context, the links which already exist to employers and other community organisations might be expanded.

The underlying theme here is about the contextual meaningfulness of the curriculum. Whilst national frameworks exist in Wales, Scotland, Northern Ireland and England, local adaption is likely to enhance both the perceived value of schooling and the quality of learning.

WARRANT

The word 'warrant' has several meanings associated with forms of authorisation and justification, ranging from the Royal Warrant to an arrest warrant (see also page 7).

In relation to pedagogy, the concept of warrant challenges us to justify our practice to stakeholders such as parents, employers and learners themselves. We defined pedagogy earlier as 'the act of teaching, together with its attendant theory and discourse' (p 4). Further, it was suggested that maintaining a sound educational rationale and forms of reflective practice can support continuing improvement in the quality of professional judgements (p 8/9). This is one clear way of fulfilling the responsibility, set out in the Codes of Conduct and Practice of the UK GTCs, for maintaining the quality of teaching.

DEPENDABILITY

How much confidence can we place in different forms of assessment? Technically speaking, high dependability arises when an assessment is both valid and reliable – it measures what it is intended to measure and it does so with high consistency.

Consistent reliability is not easy to achieve. As TLRP's Commentary on assessment pointed out (Mansell and James, 2009), this can be undermined by unfair or biased marking and by variations in standards applied by different teachers. Other studies have shown how differences in testing situations or in pupil preparation can affect performance. Electronic marking may achieve consistency in that respect, but struggles on some tests of validity. On the other hand, teacher assessment is likely to strengthen the validity of judgements made, but remains vulnerable to inconsistency unless moderation processes are taken extremely seriously.

For all these reasons, the dependability of school assessments always has to be worked for.

4

Institutional context
Does the school support a common vision to
extend educational experiences and inspire learners?

Pupil consultation is right on target

When Rivington and Blackrod High School consulted with pupils about target setting, it helped to inform teachers' understanding of what school learning felt like for Year 10 and Year 11 students.

By the end of the initiative, the whole-school approach was giving a more active role to students in deciding their targets. Teachers were offering clearer guidance on ways of raising attainment in specific subject areas. Students now had a much clearer understanding of their targets and seemed motivated by the increased ownership and choice, while remaining realistic about their capabilities.

Nine students worked with humanities teachers for two years to investigate pupil views and attitudes towards learning, and how the school's work on target setting could be improved. The teachers and students met regularly to discuss their progress and attainment. During interviews with a researcher from TLRP's 'Consulting Pupils' network, the students indicated that they:

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• wanted respect and to be involved in their education;
• did not tolerate poor learning environments;
  • had clear ideas about what good teaching and learning looked like;
  • had mixed feelings about the value of target setting; and
    • wanted to know how to improve their work as well as what required improvement.

Some students felt that being told that they would receive a poor grade affected their confidence. Others made suggestions for improvements:

"Someone that knows you should sit down and speak to you and discuss where you are now and what you think you can achieve." (Y10 student)

"It's easier if the teacher has a word with you and says, 'Look, you're slipping in this' rather than having to set the grades." (Y10 student)

Involvement in the project saved one student from being permanently excluded. He now felt he could talk to staff, and the kudos of being involved enhanced his self-esteem and tolerance of school systems.

Under the new process, students were invited to set their own targets based on their average KS3 points and chances graphs. The Head of Year summed up the project's impact.

"They had a much clearer understanding of the targets and were motivated by the element of ownership and choice yet realistic about their capabilities ... It is surprising what nine students can achieve and I am sure they are probably unaware of the effect their work has had on school policy … It certainly opened my eyes toward the effectiveness of 'pupil voice' and has influenced the way I now encourage teams of staff to include 'pupil feedback' in the departmental procedures."

Coherence: A unified policy on target setting was established, and students understood it and what it was for.

Culture: Consulting pupils made the school's policy more relevant and effective, and gave children a sense of ownership.

Expectations: Being involved in discussing and setting their own targets enhanced aspirations and enabled children to confidently reach for higher goals.

Coherence: is there clarity in the purposes, content and organisation of the curriculum and does it provide holistic learning experiences?

Culture: does the school support expansive learning by affirming learner contributions, engaging partners and providing attractive opportunities?

Expectations: does the school support high staff and student expectations and aspire for excellence?

19

Institutional context

Three points about effective schools are often picked out.

- Effective headteachers are purposeful and act as leading professionals.
- There is a resolute commitment to the improvement of teaching and learning.
- There is shared vision to lift aspirations and provide consistency in practices across the school (Sammons, Hillman and Mortimore, 1995).

A similar list has been produced in studies of outstanding schools in challenging circumstances (Ofsted, 2009).

In complementary ways, a 'learning school' is one in which teachers, pupils and others systematically commit to collaborative self-improvement on teaching and learning. Leaders at all levels work to discover, release, support and spread the expertise of colleagues (James et al, 2007).

Pupil learning is significantly enhanced by such teacher learning. Such schools recognise the emotional intensity of good teaching and provide for teachers' well being as well as for principled, distributed leadership (Day et al, 2007).

COHERENCE	A coherent curriculum is one that makes sense as a whole; and its parts are unified and connected by that sense of the whole. This requires expert curriculum knowledge, planning and presentation of the provision. National curricula sometimes take much of this responsibility in structuring subject content, but schools are increasingly being invited to exercise judgement within less prescribed frameworks.
	Coherence and progression within areas of learning enable students to build their understanding cumulatively. In Scotland the 'Curriculum for Excellence' states that: 'all children and young people have an entitlement to a curriculum which they experience as a coherent whole, with smooth and well-paced progression through the experiences and outcomes (LTS, 2009).
	Another dimension of coherence concerns the relationship across areas of the curriculum. In England, cross-curricular studies are recommended in the new primary curriculum to enable children to apply what they have learned – an approach which 'respects the integrity of subjects but lessens the rigidity of their boundaries' (Rose, 2009).
CULTURE	School culture is often cited as major influence on teaching and learning. In ideal circumstances, a culture of collaboration would exist among the management and staff of the school, in which the values, commitments and identities of individuals are perfectly aligned with the teaching and learning strategies and aspirations of the institution. Things are usually more complicated – but the ways in which such complexity is handled is crucial.
	TLRP's studies of workplace cultures (Evans et al, 2006) contrasted 'expansive' and 'restrictive' learning environments. In the former, staff were engaged in meaningful work, with supportive leadership and opportunities for personal learning and progression. Another project showed how teachers' qualities affect pupil learning, finding that: 'pupils of teachers who are committed and resilient are likely to attain more than pupils whose teachers are not' (Day et al, 2007). A restrictive workplace culture tends to result in more pragmatic approaches to teaching as work.
EXPECTATIONS	Learners benefit when significant others in their lives believe in them. Parental and teacher expectations are particularly significant for children (Hattie, 2009) and are often based on judgements about capability and potential. Expectations are thus pervasively embedded in perception, relationships and everyday life. As such, although tacit, they may be particularly meaningful to learners and influential in the formation of self-belief. Expectations are thus a form of on-going, social assessment. When applied negatively to whole groups, then cultural expectations can present significant barriers to learning.
	Because of its significance, raising expectations is a common recommendation for school improvement. To be effective, such expectations have to be authentic, because a connection has to be made with the self-belief of learners. Expectations are thus inevitably linked to the leadership of the school as a whole, and to the culture of the communities which it serves.

5

Processes for learners' social needs
Does the educational experience build on social relationships, cultural understandings and learner identities?

Removing barriers to learning

Teachers at an East Midlands primary school wanted to find ways to improve the learning of lower attaining pupils, so they asked the children themselves. Their answers, along with the findings from classroom observations by researchers, were used to create a more positive learning environment for all.

The school focused on 12 low-attaining children with special educational needs over a half-term. Pupils were asked questions such as:

• What helps you learn in English?
• What helps you learn in Maths?
• What makes it difficult for you to learn?
• Is there anything the teachers or other children can do to make it easier for you to learn?

The most significant findings were that:

• most pupils believed they could only work with the support of adults
• there were limited opportunities for independent work; and
• the children liked receiving praise for effort and incremental progress

The school acted on these findings. Opportunities for more individual work were provided, and for independent work. Teachers continued to praise pupils for their effort but also

fed back more particularly on what particular things they had done well.

The school built opportunities for greater independence into lesson planning and designed more activities which would enable children to experience success. For example in maths, simpler individual exercises were designed and pairs of pupils were sent to do an activity together without help from an adult. Teachers also began to focus on constructive feedback as well as straight forward praise. For example: 'That's great, you've got the first sound of every word right'. The researchers also talked with support staff about the importance of both making positive comments to the children and prompting the children without giving them answers. On top of all that, pupils saw their comments being acted upon.

TLRP projects (Ainscow et al 2006, Howes, 2009) found that the development of inclusive practices requires those within a school to focus collaboratively on how to remove barriers experienced by excluded learners. Becoming more inclusive involves being ready to experiment with new practices which can meet specific personalised needs.

Personalisation: The school set out to revise its programme for special needs children in the light of evidence about what those children wanted and needed.

Relationships: By asking for children's views and acting on them, teachers showed that respect was mutual.

Inclusion: By receiving constructive feedback and opportunities, children with special needs and lower attainers could develop both confidence and skills.

For more information on the two TLRP projects, see: www.tlrp.org/proj/phase1/phase1asept.html or consult: Ainscow, M., Booth, T and Dyson, A. (2006) *Improving Schools, Developing Inclusion* (London, Routledge). And view: www.tlrp.org/proj/smbdavies.html or consult: Howes, A. Davies, S.M.B. and Fox, S. (2009) *Improving the Context for Inclusion: Personalising Teacher Development through Collaborative Action Research* (London, Routledge). The case study is drawn from: Walters, E., McParland, J., & Lichfield, G (2008) *How inclusive are our classrooms?* (London: NTRP). Further information can be found at: www.gtce.org.uk/teachers/rft/low_attain0609/low_attaib0609cs/cs4/

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Personalisation: does the curriculum resonate with the social and cultural needs of diverse learners and provide appropriate elements of choice?

Relationships: are teacher-pupil relationships nurtured as the foundation of good behaviour, mutual wellbeing and high standards?

Inclusion: are all learners treated respectfully and fairly in both formal and informal interaction?

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Processes for learners' social needs

Once, teaching was based on filling the 'empty vessel' of each child's mind. Later, the activity of the pupil in 'making sense' of new knowledge became recognised. In both cases, the learner was treated as an individual, with little consideration of social circumstances and relationships.

Now, the enduring role of culture and social processes are better understood. The ways in which knowledge is represented and understood are cultural, and the processes through which pupils engage with learning are influenced by peer and teacher relationships within the school and by family, community and media beyond.

Further, young people are engaged not only in learning specific knowledge and skills, but in a process of personal development. They develop an identity within their network of social relationships in family, school and community.

This is not easy, and provision for personalisation, good relationships and inclusive participation are likely to be greatly appreciated by children and young people.

PERSONALISATION

There has been much discussion in England about the meaning of 'personalised learning'. The Chief Inspector explained: 'Personalising learning means, in practical terms, focusing in a more structured way on each child's learning in order to enhance progress, achievement and participation' (Gilbert, 2006, p2). Her recommendation was for more responsiveness from teachers, including use of assessment for learning, pupil consultation, learning how to learn and new technologies.

This is not, then, a throwback to 'child-centredness' in the sense of following pupil interests for their own sake. Rather, it proposes customisation of curriculum entitlements so that learners from diverse backgrounds and capabilities are better able to engage with them appropriately. Personalisation thus implies elements of choice. However, for both manageability and effectiveness, many of these choices are likely to be structured around common issues which arise in tackling learning difficulties or extending understanding.

RELATIONSHIPS

'Good relationships' between the teacher and the class are at the heart of pedagogic effectiveness – and every teacher knows this. But what does it really mean?

Both pupils and teachers can feel vulnerable in classrooms, but a good relationship is founded on mutual respect and acceptance of ways of getting on together – described technically as a 'working consensus' (Pollard, 1985). This embraces taken-for-granted rules about acceptable behaviour and understandings about how infringements will be dealt with.

The teacher leads in establishing such rules, but must be mindful of pupil interests and act fairly and consistently. The understandings which result are the basis of the moral order of the classroom and the foundation of good behaviour. Expectations for standards of work then follow. As successes are achieved, a sense of fulfilment and well-being is shared, and a positive classroom climate is created. This climate has to be nurtured and sustained over time, for its ebb and flow can be sensed.

INCLUSION

Every child certainly does matter, and ensuring that no one is 'left behind' is not easy. Children with special educational needs within mainstream classes require particular attention to ensure that potential barriers to their learning are removed as far as possible. In the case of a physical disability this may require a practical form of provision. Inclusion is more complex for children who have some form of learning difficulty. Careful and sensitive diagnostic work is necessary.

An enduring problem for education systems is that some groups of pupils tend to underperform. The strongest pattern is that of social class but other factors such as ethnicity and gender are important too. TLRP's inclusion projects showed how teacher expectations about capabilities influence learners – sometimes adversely (Ainscow et al 2006). Engaging positively is thus likely to be very helpful (Howes et al, 2009). Where teachers do differentiate between pupils, the effects are often reinforced by the polarising effects of child culture.

6

Processes for learners' emotional needs
Does the educational experience take due account
of learner views, feelings and characteristics?

Becoming an individual

**Hazel had a vivid imagination and considerable artistic
skills. When she started primary school, she was also
very determined and somewhat egocentric. Her school
learning in Reception and Year 1 was disappointing
and she tended to reject the curriculum tasks offered
by her teachers in favour of the richness and
independence of her own imaginative world. For Hazel,
school offered little that was meaningful.**

In Year 2 there were three important developments. First,
Hazel was taught by a teacher who really worked to
develop a close relationship. The teacher described the
result as 'like opening Pandora's Box'. Second, Hazel
began to be aware of her younger sister's progress.
Affection and support from parents was now mixed with
sibling rivalry, and this focused Hazel's attention on learning
to read. Third, Hazel's parents worked closely with her
teacher. They read to Hazel, supported her attempts to
read and talked to her about her approach to books.

After one bath-time chat about what to do if 'stuck' on
a word, Hazel finally began to believe in herself. Her
father said, 'Well, you're good at teaching
yourself … You're the one that's learning and
picking these things up'. Tucked up in bed and
with books around her, she found that it was
true. She *could* work things out, and she began,
bit by bit, to read. Moving from concern and support,
her parents and teacher then had to manage her
pride and enthusiasm.

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Hazel was one of a group of children whose learning was
tracked by TLRP researchers from reception through their
entire school careers. The researchers sought to
understand the social influences on the children as they
learned and developed as individuals.

For Hazel, there was a supplementary discovery – that she
could express her imagination through writing. This gave
her a medium for success within the core curriculum, and in
this respect, the curriculum and the person began to
connect. Hazel's learning needs fascinated many of her
successive teachers and, when engaged, Hazel was able
to realise much of her potential. Sadly, there were no similar
developments in mathematics; and performance testing
passed her by as 'something done to her'.

In primary school, Hazel formed a strong friendship with
Harriet. They shared similar perspectives, independence
and humour. By eleven, their culture was distinct, their self-
confidence had developed and their individual identities
were assured as they moved into secondary education.

Factors such as the school's curriculum plans, Hazel's
national test results, her teachers' subject knowledge and
pedagogic skill, Ofsted findings and the market position of
the school were all relevant to this story. But they are wholly
inadequate as a way of understanding what was going on
as Hazel learned and developed as a person. In her early
twenties, Hazel studied and worked as an artist.

Relevance: As a young child, Hazel was unable to engage
with the curriculum until she found ways of expressing
herself and succeeding in school terms.

Engagement: Hazel's teacher and parents took a real
interest in her and provided her with personalised
opportunities to learn.

Authenticity: Test scores don't matter to every child.
For a girl like Hazel, self assessment was more important.

Relevance: is the curriculum presented in ways which are meaningful to learners and so that it can excite their imagination?

Engagement: do the teaching strategies, classroom organisation and consultation enable learners to actively participate in and enjoy their learning?

Authenticity: do learners recognise routine processes of assessment and feedback as being of personal value?

23

Processes for learners' emotional needs

We all, at any age, value our dignity and appreciate it when our individuality is recognised. And we also, as part of our personal development, have to learn to appreciate the needs of others.

Goleman (1996) called this 'emotional intelligence' – an idea which combines social empathy and skills with personal awareness, motivation and capacity to manage one's own feelings. Schools have always worked hard to support such development though curricular provision such as PSHE, drama and the arts.

Feelings about learning itself will directly affect outcomes. Pupils are expert at detecting teacher mood, respect and interest, and research demonstrates the importance of providing a consistent, positive classroom climate.

Confidence to tackle new learning challenges is significantly helped by interesting curricula, engaging activities and meaningful feedback. Pitching such learning experiences appropriately is crucial too, with anxiety arising if they are too challenging, and boredom if deemed too easy, repetitive or irrelevant. Such feelings are felt individually but are almost always strongly influenced by peer culture. John Holt's classic book, *How Children Fail* (1964), argued that underperformance is linked to such fear of failure.

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RELEVANCE	School inspectors got this right some time ago. HMI wrote: 'The curriculum should be seen by pupils to meet their present and prospective needs. What is taught and learned should be: worth learning in that it improves pupils' grasp of the subject matter and enhances their enjoyment and mastery of it; increases their understanding of themselves and the world in which they are growing up; raises their confidence and competence in controlling events and coping with widening expectations; and progressively equips them with the knowledge and skills needed in adult working life' (HMI, 1985, p 45).
	Quarter of a century later, we have even more diverse and rapidly changing societies. Inequality and under-performance remain intractable for many, so the challenge for schools to offer relevant curricula is very considerable. This is one reason why national frameworks should provide for local adaption, and why teachers' knowledge of the learners and communities they serve is irreplaceable.
ENGAGEMENT	TLRP research on pupil consultation (eg: Rudduck and McIntyre, 2007) and learner identities (eg: Pollard and Filer, 2007) showed that, if pupils feel that they matter in school and are respected, then they feel more positive about themselves as learners. They can understand and manage their own progress better, and feel more included. The underlying driver here is termed 'agency' – the opportunity for self-directed action and fulfilment.
	Young people become more engaged if their perspectives, concerns and experiences are taken seriously. The projects found that pupil contributions were invariably practical and constructive – and were thus also beneficial to teachers. Such feedback supported more open, collaborative and communicative relationships and thus had the potential to transform pedagogic strategies and enhance learning outcomes.
AUTHENTICITY	Traditional assessments measure what a student can recall or do in the formal context of testing. By comparison, authentic assessment puts the emphasis on the meaningful application in real-life situations (Wiggins, 1989). Rather than being required to simply demonstrate performance for an artificial purpose, the learner has the opportunity to apply their growing knowledge and capability to genuine activity. The task, and feedback on it, is thus more personally meaningful. Authentic assessment is likely to affirm those who have the deeper levels of skill and understanding which are needed for application.
	Overcoming the artificiality of school so that new knowledge can be grounded in the 'real world' is not easy. Project work is a long-standing strategy and the internet and new technologies now provide wonderful resources. There are many contemporary initiatives to promote 'real-world learning', primarily because transfer of school learning in, for instance, Maths and Science, consistently proves to be difficult.

Questions are the answer

Do children learn better when the teacher seeks "right" answers, or when ideas are discussed and explored? Most people would agree on the latter, but it is very easy to fall into the trap of asking closed questions.

One science teacher radically changed his questioning techniques.

In earlier lessons, he asked individual students closed questions requiring brief factual answers. Realising the need to improve his students' learning experiences, the teacher worked on extending wait time, involving more students in whole-class dialogue and responding to incorrect answers rather than ignoring them.

Later, he taught this lesson on photosynthesis. He showed the class two geranium plants – one healthy, the other spindly.

Teacher: Okay. Ideas?
About half the class put up their hands. Teacher waits for 3 seconds. A few more hands go up.
Monica: That one's grown big cos it was on the window.
Teacher: On the window? Mmm. What do you think Jamie?
Jamie: We thought the big 'un had eaten up more light.
Teacher: I think I know what Monica and Jamie are getting at, but can anyone put the ideas together? Window – Light – Plants? Again about half the class put up their hands. The teacher chooses a child who has not put up his hand.
Richard: Err yes. We thought, me and Dean, that it had grown bigger because it was getting more food.
Some students stretch their hand up higher. The teacher points to Susan and nods.

Susan: No, it grows where there's a lot of light and that's near the window.
Teacher: Mmmm. Richard and Dean think the plant's getting more food. Susan … and Stacey as well? Yes. Susan thinks it's because this plant is getting more light. What do others think? Tariq.
Tariq: It's the light cos it's photosynthesis. Plants feed by photosynthesis.
The teacher writes "photosynthesis" on the board.
Teacher: Who else has heard this word before?
Almost all hands go up.
Teacher: Okay. Well can anyone put plant, light, window and photosynthesis together and tell me why these two plants have grown differently?
The teacher waits 12 seconds. Ten hands went up immediately he stopped speaking – five more in the pause.
Teacher: Okay. Carolyn?
Carolyn: The plant … The big plant has been getting more light by the window and cos plants make their own food by photosynthesis, it's …
Jamie: Bigger.

In this lesson, the teacher explored and helped to integrate students' understanding of photosynthesis. He created opportunities to exchange ideas, articulate thoughts and modify answers in a supportive environment.

Differentiation: The teacher enabled children with different levels of understanding to express their ideas and learn from each other in a non-threatening atmosphere.

Dialogue: The teacher drew out what children knew through careful questioning. He created a framework to help them make sense of their ideas.

Feedback: Teacher feedback was formative; it helped move on children's thinking, and encouraged them to participate.

Differentiation: are curriculum tasks and activities structured appropriately to match the intellectual needs of learners?

Dialogue: does teacher-learner talk scaffold understanding to build on existing knowledge and to strengthen dispositions to learn?

Feedback: is there a routine flow of constructive, specific, diagnostic feedback from teacher to learners?

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Processes for learners' cognitive needs

Cognition refers to the mental processes involved in gaining knowledge and understanding. These include thinking, knowing, remembering, judging, and problem solving. These high-level functions of the brain draw on capabilities such as language and perception.

The future promise of neuroscience is considerable (see Howard-Jones, 2007) but social and cultural factors remain crucial in classroom teaching and learning processes.

The brilliance of Vygotsky's psychology derives from his insight in relating cognitive, social and cultural factors together. So we meet each pupil's cognitive needs through social processes of teaching and learning, and the understanding that is developed relates to culturally embedded knowledge. Crucially, the teacher mediates between knowledge and learner. A teacher's explanation, questions, discussion, or structured task, provides a type of scaffolding – if they are appropriately framed. In these cases, the teacher combines challenge and support so that the learner is encouraged to extend their understanding.

DIFFERENTIATION

Curriculum goals must be converted to tasks and activities and then presented to learners in ways to which they can relate. Too difficult, and frustration often follows; too easy, and boredom may result. The goal is to match the learner and the task so that he or she feels appropriately challenged. Pleasure from success then reinforces learning. But since all learners are different, there is considerable skill in achieving a differentiated match.

Three basic strategies can be used to achieve this:

- *vary the task:* so slightly different tasks are set to meet the needs of particular individuals or groups;
- *vary the expected outcomes:* so whilst the whole class would participate in the same tasks and activities, pupil performance would be judged using specific criteria; and
- *vary the level of support:* so reference books or a classroom assistant might support some children, whilst others would work alone (see www.teachers.tv/video/2748)

DIALOGUE

'Whole-class interactive teaching' describes structured, teacher-controlled but pupil-active methods – such as the National Strategies in England aimed to provide. Questioning in challenging, engaging and respectful ways is an important way in which pupil understanding can be extended.

Dialogic teaching takes this further to engage the teacher and learner together and to explicitly use language as a tool for learning (Mercer and Littlejohn, 2007). Research suggests that such responsive scaffolding of learning supports longer-term commitment to learning. Alexander (2006) identified these five characteristics:

- *collective:* teachers and children address learning tasks together;
- *reciprocal:* teachers and children listen to each other, share ideas and consider alternative viewpoints;
- *supportive,* children articulate their ideas freely and confidently;
- *cumulative:* teachers and children build on each other's ideas; and
- *purposeful:* teachers plan and steer classroom talk in relation to educational goals.

FEEDBACK

Providing appropriate feedback to learners has one of the largest measurable effects of any teaching strategy (Hattie, 2009). This fact underlies 'assessment for learning' (Black and Wiliam, 1998) which has now been taken up in many school systems across the world. Such formative assessment is an integral part of pedagogy and is designed to help learners grow their capacity to manage their own learning. The TLRP project on Learning How to Learn (James et al, 2007) showed that the most effective teachers have frameworks of subject and developmental understanding which enable them to respond constructively to pupils' attempts to learn. Such diagnostic and knowledgeable flexibility is essential, so assessment for learning benefits from supportive school and policy contexts. Peer and self-assessment feedback extends this principle further, enabling learners to begin to evaluate learning independently, for themselves.

See also TLRP's Commentary, *Assessment in Schools: Fit for purpose* (Mansell et al, 2009)

A cultural revolution in teaching and learning

Mulberry school was formed from the merger of two secondary schools. Anna, the new head teacher, believed that cultural rebuilding required a concerted move from a teaching-centred view to a learning-centred view. For the Senior Leadership Team (SLT) it was an opportunity to develop a process of reflection on the very process of learning itself – learning how to learn.

When Mulberry joined TLRP's *Learning How to Learn Project* (LHTL), the most talented teachers in the 1100-pupil school were already providing Inset sessions for their colleagues, based on their subject expertise. This was complemented by departmental reviews, lesson observations and interviews with staff and young people about lessons observed.

For the SLT, LHTL would 'put learners in the driving seat'. Self- and peer-assessment would be key strategies, and setting learning objectives and understanding criteria would promote learning autonomy. Staff would therefore be able to rise above constraining demands such as targets, tables and routine 'delivery' of the curriculum.

Creating a 'learning how to learn' mindset was dependent on teacher feedback, clearly focused on helping pupils to develop their understanding, to think more critically about their learning, and to self evaluate. Guidelines for staff explained the characteristics of effective feedback.

Mulberry students were taken seriously from the outset. They evaluated lessons through an interactive pupil questionnaire on the school intranet. Examples of questions were: Does your teacher try to find out what you already know before you're starting a new topic? Does your teacher give the class opportunity to make choice and decisions about the work you're doing?

The school also instituted 'research lessons' in which two teachers plan a lesson together with a specific focus in mind. In one example, three pupils, chosen across a range of ability or approaches to learning, were observed. Later the teachers talked through what went well and what could be refined, and the lesson was repeated with another group.

For Anna the goal was to truly become a learning organisation:

> "A learning organisation would be open to change and enthusiastic about reflecting on what it's actually doing. It would be outward looking to both … academic research and also actual practice in other schools. A positive and confident place."

Asked whether this truly described Mulberry, she replied: "I'd say we're well on the way".

Progression: Research lessons supported teachers in developing their pedagogic subject knowledge, and in providing appropriate new learning challenges.

Reflection: The school provided both formal and informal structures and processes to help teachers and children think about their learning.

Development: Pupils were better able to understand, engage with and influence processes of teaching and learning, whilst self and peer assessment helped children to indentify new personal goals.

This work is discussed, with further case studies, at: www.gtce.org.uk/teachers/rft/afl_strats0507. Linked TLRP work on lesson study is described at: www.teachingexpertise.com/articles/the-lesson-study-model-of-classroom-enquiry-2950.

For more information on TLRP's Learning How to Learn project, see: www.tlrp.org/proj/phase11/phase2f.html or James, M. et al (2007) *Improving Learning How to Learn: Classrooms, Schools and Networks* (London, Routledge) and James, M. et al (2006) *Learning How to Learn: Tools for Schools* (London, Routledge).

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Progression: does the curriculum-as-delivered provide an appropriate sequence and depth of learning experiences?

Reflection: is classroom practice based on incremental, evidence-informed and collaborative improvement strategies?

Development: does formative feedback and support enable learners to achieve personal learning goals?

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Outcomes for continuing improvement in learning

Education is always, in a sense, about the tension between 'what is' and 'what might be'. The role of the teacher is to support learners in moving forward to higher and higher levels of attainment.

Ensuring progression in the educational experiences provided for pupils is therefore vital. Only through new challenges can they deepen and broaden their knowledge. However, the ultimate educational goal is to support the development of self-motivated and resilient learners who are not only knowledgeable but capable of taking control of their own learning. Through encouragement to achieve personal learning goals at school, we sow the seeds of commitment to lifelong learning.

Reflective processes provide ways of marrying such ambitions, of reconciling what is and what might be. They enable teachers to monitor their own performance, both reflexively and in collaboration with others, and thus to stimulate their own continuing professional development.

PROGRESSION	Teaching which consistently achieves cumulative progression for learners requires high levels of subject knowledge, three components of which were identified by Schulman (1986).

'Content knowledge' is fundamental. Teachers in full command of the raw material of their subject are better able to, support, extend and deepen the learning of their pupils.

However, teachers must also understand how to use such knowledge in their teaching. Such 'pedagogical content knowledge' enables expert teachers to connect the subject to the learner. The teacher understands the best way of explaining key points, of framing particular tasks, of using examples for their subject. One TLRP project studied ways of teaching secondary science (Millar et al, 2006). Another investigated 'threshold concepts' – big ideas without which further understanding in a field is blocked (Land et al, 2006).

The third and final form of subject expertise is 'curricular knowledge'. This concerns understanding the way subject material is ordered, structured and assessed by national requirements, institutional policies or other circumstances. |
| **REFLECTION** | This concept represents a commitment to continuing and principled professional improvement. Reflective practice is based on open-minded enquiry and a willingness to use evidence to challenge one's own provision. This might be based on external evidence of school or pupil performance, on reading research findings, on small-scale personal enquiries or observations, on discussions or collaborative activities with colleagues. There are many possibilities but, in all cases, evidence is used to generate re-appraisal. In this way, taken-for-granted thinking is challenged and professional judgement is refined. Working with colleagues in a department, school or network provides additional support and professional enrichment.

Reflective enquiry may be focused on particular problems or issues and is best carried out in systematic ways and for specific purposes. Understanding then becomes embedded in teacher expertise and enables decision-making at other times. Reflective teaching is supported in a comprehensive handbook (Pollard, 2008), collection of readings (Pollard, 2002) and a website (www.RTweb.info) incorporating many TLRP findings. |
| **DEVELOPMENT** | Physical, cognitive, social and emotional development all influence and are influenced by educational experiences. This, we know, is an enduring process (see for instance, Blyth, 1984). Resilient and resourceful learners develop when teaching combines appropriate challenge and support – 'building learning power', as Claxton puts it (2002).

Assessment for Learning aims to involve pupils in their own assessment so that they can reflect on where they are, where they need to go next and how to get there (Assessment Reform Group, 2002). This requires an understanding of desired outcomes and of appropriate processes of learning, as well as the opportunity and commitment to act on such knowledge. Such self-regulated approaches to learning can be nurtured by encouraging students to set personal learning goals and by providing supportive feedback. Long-term developmental outcomes concern pupils' beliefs in themselves as learners, their skills in diagnosing learning challenges and their capacity for personal development in the future. |

Outcomes for certification and the life-course
Does the educational experience equip learners for adult and working life and for an unknown future?

'Here's the keys, you're free now'

Tony Wilf was in his fifties, adjusting to the death of his wife, and had two young teenagers still at home. He wanted to look after them properly, and thought it would be nice to make home-made fish and chips. "I couldn't remember how to do batter so I asked one of the old ladies next door, and she gave me this book," he told researchers. Tony ended up going to the chip shop because he couldn't ask the neighbour, or his children, to read the recipe out to him.

It was 40 years after leaving school that Tony was finally diagnosed with dyslexia. In fact, this came about because he was trying to help his daughter, Clare, with her own literacy.

Clare has been more fortunate in her schooling than Tony was all those years ago. "I was told time and time again by teachers, 'you're thick, you don't understand'. If somebody had said, 'right, what's the problem?'...that would have been fine."

Tony worked as an unskilled labourer for most of his life, and enjoyed learning from the older craftsmen, but he knew his literacy problems had stopped him from advancing.

It was the need to help his daughter that finally brought him back to education. She had trouble with her handwriting, so Tony wanted to get a computer to print out her work. "So I went to 'Computers for the Terrified'. And it worked. I got into it, I really enjoyed that, and then something came up about 'insert so and so after the third paragraph' and I thought, 'what's a paragraph?' … so that's why I started coming back to doing the English …"

Tony's first English class didn't work out because he and the tutor got into arguments about his use of block capitals to write letters. His school experiences had left him unable to deal with not being listened to. Fortunately he tried again, and this time the tutor dealt with students as individuals. The use of coloured overlays designed for dyslexics led to a big improvement in his reading. Apart from improving his basic skills, the courses provided a focus for his life: "what I like about it, you know, everybody works as a group; nobody takes the mickey out of anybody".

Tony became interested in local history and started writing. "It's as though I've been locked away for years and somebody's said, 'well here you go, here's the keys, you're free now'," he said.

Effectiveness: With sensitive and resourceful teachers, even people who have had bad experiences of formal school can enjoy learning, gain new skills and contribute to society.

Empowerment: Supportive adult education opened new horizons for Tony, releasing his innate talents and interests.

Consequence: Tony gained a personal computing certificate and hoped to gain an English GCSE, but his confidence came from success in his own terms.

Tony's case is adapted from, Hodkinson, P., et al. (2007) 'Learning as Being', Working Paper 6, Learning Lives Project, TLRP. It is available, with much more, from: www.tlrp.org/proj/phase111/biesta.htm. An accessible book of the project is: Biesta, G., Field, J., Goodson, I., Hodkinson, P. and Macleod, F. (2010) *Improving Learning Through the Lifecourse* (London, Routledge). A comprehensive case for lifelong learning has been made by Schuller, T. and Watson, D. (2009) *Learning Through Life* (Leicester, NIACE).

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Effectiveness: are there improvements in standards, in both basic skills and other areas of curricular attainment, to satisfy society's educational goals?

Empowerment: is the pedagogic repertoire successful in enhancing wellbeing, learning disposition, capabilities and agency?

Consequence: do assessment outcomes lead towards recognised qualifications and a confident sense of personal identity?

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Outcomes for certification and the life-course

What outcomes do we want from education?

We certainly need people who can contribute effectively in economic terms within the labour market. We also need citizens with social and global awareness in response to growing cultural diversity and the ecological challenge. We need those who will become good parents and contribute to their communities and civil society. And then there is the need for future technologists … and the arts ... and so on, and so on.

Whilst there is relative continuity in general priorities, specific needs and circumstances do change over time. From this perspective, outcomes such as having self-confidence and a positive learning disposition relate to 'agency' – the intrinsic, personal capacity to adapt to circumstances throughout the lifecourse.

Examinations are the traditional way of certifying capabilities in relation to summative attainment in mainstream school subjects. However, innovative forms of assessment, such as portfolios, may be more appropriate in representing developmental achievements.

EFFECTIVENESS	School performance is a major public issue and will always be a concern of parents, governors, local authorities, media and politicians. And the moral commitment of teachers to learners also calls for active monitoring of outcomes. Such reviews of performance provide a valuable focus for systematic reflective and collaborative enquiry.

Inspection of schools is managed in different ways in each nation of the UK, but there appears to be an increasing focus on the quality of teaching and learning itself and, of course, on pupil outcomes. Significantly, the professional judgement of inspectors has the potential to tackle issues which numeric data cannot reach. Where measures are collected, contextualised value-added analyses have not always supplanted the crude aggregations on which league tables of school performance are often founded. For monitoring the performance of school systems as a whole, the most common strategy internationally is to sample performance in key subject areas, as is done in the OECD's PISA study. |
| **EMPOWERMENT** | TLRP researched learning at many stages of life and found that agency and self-belief were crucial at every age and in nursery, school, college, workplace, family and home settings (see: www.tlrp.org/projects). Indeed, the first of TLRP's Ten Principles states that: 'Learning should aim to help people to develop the intellectual, personal and social resources that will enable them to participate as active citizens and workers and to flourish as individuals in a diverse and changing society'. So empowerment is the very stuff of 'education' in its broadest sense. But what does this mean in the classroom?

Dweck (2000) contrasted pupils with a 'mastery' orientation from those who develop 'learned helplessness' in school. The conditions and experiences of classroom life contribute to such self-beliefs. By creating opportunities for learners to take independent action and experience success, teachers support the development of self-confidence and positive learning dispositions (see www.gtce.org.uk/teachers/rft/challenge1007). |
| **CONSEQUENCE** | At the end of the day, teachers need to consider whether or not they have been able to enrich the lives of the learners in their care and increased learners' life chances.

Are they better able to acquire the qualifications they will one day need to enter the labour market? We need to be sure that new knowledge, understanding and skills are secure. In national curriculum terms, pupils may have moved through various levels of attainment – but we may also be able to detect and celebrate other achievements. It is crucial, of course, that all students acquire good basic skills before they leave school.

Have they developed more self-confidence and a stronger sense of personal identity? Education has sometimes been characterised as the process of 'becoming' a person, and it is certainly important to affirm the role of teachers in facilitating the emergence of confident individuals and future citizens (see TLRP's Learning Lives project: Biesta et al, 2010). |

How can the conceptual framework support teachers in their professional lives? How can it support school development strategies?

The conceptual framework holds together, on one page, the ethical and professional issues that teachers face on a day-to-day basis. It is offered as a tool – which can be contested, debated and developed – to support teachers in the reflective aspect of the role. It is a reference point for the big questions that underpin teachers' thinking when they make judgements about how to take children's learning forward.

On the surface, the concepts and questions which make up the framework may seem quite straightforward, axiomatic even, but if you dig deeper it can identify areas which may need development.

For example, it asks, 'do the school and its staff set and sustain high expectations?' Which school would answer 'no'? But when thinking about how these high expectations are communicated with pupils and others, both formally and informally, a school needs to ask many other questions. These help them examine practice to ensure that those high expectations are really lived throughout the school.

Here are three ways in which teachers have used the framework so far.

Supporting curriculum development

Danecourt School in Medway is redeveloping its approach to the foundation subjects to make them more relevant and accessible to the children.

The staff team are using the conceptual framework to assess and evaluate the content, approach and effectiveness of their new ideas. They believe that teachers need to feel ownership of such concepts, and keep them in mind when planning. The pedagogic concepts ensure that the provision does what it sets out to do and they link closely with the priorities of the new Ofsted framework, the Self Evaluation Form and the Every Child Matters agenda.

"I feel the concepts in the framework reflect the important elements of a 21st century school curriculum. For me it asks the questions of why and how we are teaching rather than what - and it offers a structure to think about our provision. Pedagogy, it seems, has for some years not been as important a discussion topic as SATs and results, but I think that effective pedagogy needs to be our principal concern."

John Somers, Headteacher, Danecourt School, Medway

This approach could be extended to whole-staff groups when discussing the school's values, vision and mission statement. It could offer a way of developing shared understandings and approaches for coherence in practice across the school.

Using narrative to understand teaching and learning

To start a discussion about effective teaching, Piper Hill, a special school, decided to use narrative as a technique to get teachers talking. Everyone was asked to write about a successful lesson, describing and analysing it to say what made it work. This proved an energising and enjoyable starting point, allowing detailed reflection but with room for some creative telling!

Having shared their stories, the staff considered their practice in the light of the framework. How far were the concepts and questions reflected in their planning and experiences? What changes would there have been if certain questions had been asked before planning the lesson? The stories of practice were then made into a booklet for all staff.

> "The framework offers a way of looking at our practice with a discerning eye, and to really discuss what we're doing. It reveals gaps and collectively we can develop the solutions."
>
> *Wendy Godfrey, Deputy Head, Piper Hill School, Manchester*

A similar approach was used in a large secondary school with members of the Creative and Performing Arts Faculty.

Having shared written accounts of successful lessons, this group used the framework to discuss the concepts and questions in relation to their practice. What became apparent to the team was the depth of conversation it created, with such questions as, 'what do we mean by core educational values and objectives?' And, 'are these core educational values and objectives shared by all members of the profession?'

There was also a discussion about whether the conceptual framework implicitly promoted 'established teaching strategies as suggested in the 'Principle' cell (first row), and was in danger of discouraging teachers from experimenting or innovating. However, as it refers to *principles* rather than practice this danger is minimised. Colleagues felt that it was useful to reflect upon *good* lessons. Normally, they were much more likely to focus on less successful ones. And they felt it was helpful to share these good lessons within and beyond subject teams.

> "The framework provided a basis for us all to re-evaluate our practice, and to look at elements of teaching. If it is to be useful to all, it needs us to exemplify the framework with examples from across subjects, something we are looking at doing."
>
> *Steve Maxson, Assistant Headteacher at ftc Performing Arts, Maths and Computing College, North Lincs*

A third school used the conceptual framework to reflect on practice as part of its induction programme for teachers new to the profession from the different routes of PGCE, the Graduate Teacher Programme and the Overseas Teacher Training Programme.

> "The exercise generated an interesting discussion. It was an intellectually challenging exercise. The session lasted for 45 minutes and in that time we were able to explore the framework, apply it and discuss it. I think the evidence shows that the framework created a useful basis for discussion of teaching and learning."
>
> *Mark Potts, CPD Leader, Salisbury High School, Wilts*

Creating school improvement groups structured on the conceptual framework

St Joan of Arc Catholic School in Hertfordshire built the framework into its work on whole school improvement. School improvement groups were established for curriculum, pedagogy and assessment – Joan of Arc's strategic development areas. Teachers opted to attend a group and develop ideas on behalf of the whole school. All were self-governing; teachers agreed their own agendas and areas of focus, and then identified strategies which would lead to whole school change and development.

Within the Pedagogy team, the conceptual framework was first introduced and discussed at its Teaching and Learning focus group, which comprised the core subjects and the school's specialist subjects of science, maths and computing. Subject leaders in the group had individual learning conversations with other middle leaders to ensure high quality debate and understanding of the framework. This conversation was replicated with staff in department meetings.

This model of working offered the opportunity for each group to debate the concepts and the questions in the framework to examine current practice, identify development needs and come up with creative solutions for implementing change and leading school improvement.

The framework was used as the foundation to restructure and reconnect teachers with the enduring questions asked as part of any educational process in any learning environment.

> "We wanted to develop a model of distributed leadership linked to our school improvement priorities, involving the whole staff. We needed a secure foundation on which to scaffold our school improvement work. The conceptual framework provided it."

> *Paul Kassapian, Deputy Head, St Joan of Arc Catholic School, Hertfordshire*

Ambitions for the future

These are some of the ambitions expressed by teachers who have used the conceptual framework:

I'd like to see familiarity with the framework throughout the profession and a growing pride amongst teachers of our professionalism.

Teaching and learning being discussed in national media – and pedagogy as the key focus for Ofsted.

The framework should be part of a school's vision.

A more formidable staff which, independently, will develop professionally and not tolerate fads.

Teachers using the framework to test out and challenge practice and improve learning – developing a real shared language about teaching.

The aim of this Commentary has been to offer ideas to stimulate discussion about pedagogy and professionalism in school teaching. This heralds the start of what we hope will be a long-running conversation in which many voices will be heard in the evolution of more collaborative, sustainable and explicit professional understandings about pedagogy.

Specifically, the Commentary has presented a conceptual framework which holistically represents the major dimensions of teacher expertise. Such holism is itself important. Indeed, it demonstrates why teaching is both so difficult and so fascinating.

The framework itself is organised around nine enduring issues concerning educational aims, learning contexts, classroom processes and learning outcomes. Each issue is explored in relation to curriculum, pedagogy and assessment and the Commentary provides both a case-study illustration and a brief introduction to some of the research which underpins each concept.

The GTCE and TLRP believe there is a particular opportunity at the present time for the profession to reflect on, share and develop their expertise on teaching and learning. Indeed, a constructive response to this challenge is seen as being central to achieving sustainable improvements in outcomes for learners and to enhance the status of the profession.

This Commentary was generated from the unprecedented programme of research which the Teaching and Learning Research Programme created and synthesised - in particular, from its Ten Principles for Effective Teaching and Learning. The principles have also been used to generate discussions with the education community and its stakeholders and to raise issues about the status of 'pedagogy' in reflective practice and professional development.

Evidence-informed principles, concepts and expertise may be the bedrock of pedagogic quality, but we cannot ignore the structural constraints which many communities, families and children experience and to which their teachers and schools must respond. There is, for instance, still a great deal of poverty and inequality within the UK. Having celebrated the strength and potential of teacher expertise, such challenges must also be acknowledged.

In our complex and rapidly changing world, teachers' moral commitment and professional resilience remain as important as ever.

Teacher expertise: towards a conceptual framework

ENDURING ISSUES		CURRICULAR CONCEPTS	PEDAGOGIC CONCEPTS	ASSESSMENT CONCEPTS
EDUCATIONAL AIMS	**1. Society's educational goals** What vision of 'education' is the provision designed to achieve?	**Breadth:** does the curriculum represent society's educational aspirations for its citizens?	**Principle:** is the pedagogy consistent with established principles for effective teaching and learning?	**Congruence:** are forms of assessment fit-for-purpose in terms of overall educational objectives?
	2. Elements of learning What knowledge, concepts, skills, values and attitudes are to be learned in formal education?	**Balance:** does the curriculum-as-experienced offer everything which each learner has a right to expect?	**Repertoire:** is the pedagogic expertise sufficiently creative, skilled and wide-ranging to teach all elements of learning?	**Validity:** in terms of learning, do the forms of assessment used really measure what they are intended to measure?
LEARNING CONTEXTS	**3. Community context** Is the educational experience valued and endorsed by parents, community, employers and civil society?	**Connection:** does the curriculum engage with the cultural resources and funds-of-knowledge of families and the community?	**Warrant:** are the teaching strategies evidence-informed, convincing and justifiable to stakeholders?	**Dependability:** are assessment processes understood and accepted as being robust and reliable?
	4. Institutional context Does the school promote a common vision to extend educational experiences and inspire learners?	**Coherence:** is there clarity in the purposes, content and organisation of the curriculum and does it provide holistic learning experiences?	**Culture:** does the school support expansive learning by affirming learner contributions, engaging partners and providing attractive opportunities?	**Expectation:** does the school support high staff and student expectations and aspire for excellence?
CLASSROOM PROCESSES	**5. Processes for learners' social needs** Does the educational experience build on social relationships, cultural understandings and learner identities?	**Personalisation:** does the curriculum resonate with the social and cultural needs of diverse learners and provide appropriate elements of choice?	**Relationships:** are teacher-pupil relationships nurtured as the foundation of good behaviour, mutual wellbeing and high standards?	**Inclusion:** are all learners treated respectfully and fairly in both formal and informal interaction?
	6. Processes for learners' affective needs Does the educational experience take due account of learner views, feelings and characteristics?	**Relevance:** is the curriculum presented in ways which are meaningful to learners and so that it can excite their imagination?	**Engagement:** do the teaching strategies, classroom organisation and consultation enable learners to actively participate in and enjoy their learning?	**Authenticity:** do learners recognise routine processes of assessment and feedback as being of personal value?
	7. Processes for learners' cognitive needs Does the educational experience match the learner's cognitive needs and provide appropriate challenge?	**Differentiation:** are curriculum tasks and activities structured appropriately to match the intellectual needs of learners?	**Dialogue:** does teacher-learner talk scaffold understanding to build on existing knowledge and to strengthen dispositions to learn?	**Feedback:** is there a routine flow of constructive, specific, diagnostic feed-back from teacher to learners?
LEARNING OUTCOMES	**8. Outcomes for continuing improvement in learning** Does the educational experience lead to development in knowledge, concepts, skills and attitudes?	**Progression:** does the curriculum-as-delivered provide an appropriate sequence and depth of learning experiences?	**Reflection:** is classroom practice based on incremental, evidence-informed and collaborative improvement strategies?	**Development:** does formative feedback and support enable learners to achieve personal learning goals?
	9. Outcomes for certification and the life-course Does the educational experience equip learners for adult and working life, and for an unknown future?	**Effectiveness:** are there improvements in standards, in both basic skills and other areas of curricular attainment, to satisfy society's educational goals?	**Empowerment:** is the pedagogic repertoire successful in enhancing wellbeing, learning disposition, capabilities and agency?	**Consequence:** do assessment outcomes lead towards recognised qualifications and a confident sense of personal identity?

Resources, opportunities and debate

References

This TLRP Commentary can be downloaded as a whole from: www.tlrp.org/findings and may be printed and copied without charge for educational uses, as long as the source is acknowledged. TLRP's research findings for schools are also summarised there in various accessible ways, including a Teachers' Guide, posters, research briefings, commentaries and downloadable video material.

This Commentary and the framework are contributing to a range of activities to support teacher learning and the development of teacher professionalism that are being run by the GTCE. For further information please see www.gtce.org.uk/teachers/pedagogy or email pedagogy@gtce.org.uk

Provision has also been made for debate about the conceptual framework through Cloudworks - a social networking site dedicated to sharing and discussing learning and teaching ideas internationally. To participate, please go to: www.cloudworks.ac.uk/go/concepts. A 'cloudscape' on the Commentary will be complemented by flash debates on specific topics during 2010.

Outcomes from these activities will be harvested and further versions of the conceptual framework will be published within Andrew Pollard's website for Reflective Teaching: www.rtweb.info/concepts.Such material is freely available for download and use in schools, colleges and elsewhere under a Creative Commons Attribution-Non-Commercial-Share-Alike license.

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This is the fifteenth in a series of TLRP Commentaries designed to make research-informed contributions to public discussion of contemporary issues, initiatives or events in UK education. Further copies of this publication can be downloaded from: www.tlrp.org/findings.

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TLRP is the UK's largest contemporary investment in education research. It studied issues enabling improvements in outcomes for learners across all educational sectors. TLRP's generic phase ran from 2000 to 2009, and an extension on Technology Enhanced Learning completes in 2012.

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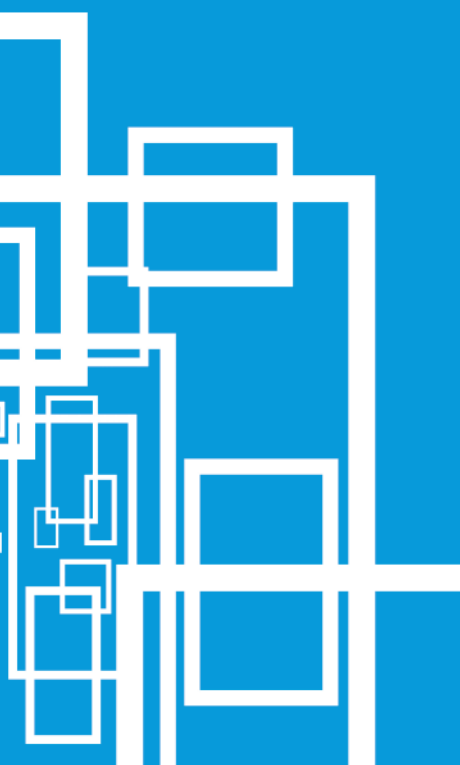
About the General Teaching Council for England

The GTCE is the professional body for teaching in England. It sets out and maintains standards for the teaching profession in the interests of the public. It provides advice on issues that affect the quality of teaching and learning, and works with teachers to make sure its advice is based on practical experience and reliable research.

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