

Teacher Professionalism and Evidence-Informed Reflective Practice

SCoTENS Annual Conference
Dublin 15-16th October 2009

Andrew Pollard, TLRP

- 1. Challenges for Teacher Education?**
- 2. TLRP and principles for teaching and learning**
- 3. Teacher professionalism and reflective practice**

The most effective teachers:

- **Recognise the complexity of teaching and learning**
- **Never stop learning themselves**
- **Enjoy teaching**

Part 1

Challenges for Teacher Education?

Challenges for teacher education?

Progressive economic growth since 1983

Significant investment by multinationals and strong EU trade

Spectacular growth and top of global quality-of-life index

GDP expected to fall 9.8% during 2009/10 (OECD)

Borrowing at 25 billion Euro per annum

Unemployment at 12.6%

Risks from globalisation

Endorsing the Lisbon Treaty for EU reform

Financial restraint

Developing Ireland's *human* resources through education

Challenges for teacher education?

Strong traditions

1887 Trinity College Dublin – examinations in the ‘theory, history and practice of education’

1899 Royal University of Ireland – introduces ‘Diploma in Education’

1905 Trinity College Dublin – first Chair in Education

[1868 Early origins of INTO]

O’Donoghue and
Harford, 2009, EERA

Challenges for teacher education?

Independence

Overturning British policy of cultural assimilation

Significant Catholic control over education

Largely denominational conduct of schools, teacher training colleges and university education departments

O'Donoghue and
Harford, 2009, EERA

Challenges for teacher education?

Social and economic development since the 1960s

O'Donoghue and
Harford, 2009, EERA

Challenges for teacher education?

1990s 'Unprecedented review of education'

Reviews of Education Policies for Education (1991) OECD

Education for a Changing World (1992)

National Education Convention (1994)

Charting our Education Future (1995)

Education Act (1998)

O'Donoghue and
Harford, 2009, EERA

Teaching Council Act (2001)

Challenges for teacher education?

The teaching profession

Very competitive entry

Highly esteemed profession

Strong teacher associations

Active new Teaching Councils

O'Donoghue and
Harford, 2009, EERA

Challenges for teacher education?

In many Member States **there is little systematic coordination between the different elements of teacher education**, leading to a lack of coherence and continuity, especially between a teacher's initial professional education and subsequent induction, in-service training and professional development.

Nor are these processes often linked to school development and improvement, or to educational research.

(European Commission, *Improving the Quality of Teacher Education*, 2007)

O'Donoghue and Harford, 2009, EERA

Challenges for teacher education?

What are the most significant contemporary challenges facing teacher education?

On what educational principles, should responses to these challenges be based?

Understanding teaching & learning holistically?

Reflective teaching for continuous professional improvement?

Part 2

TLRP and its ‘ten principles for effective teaching and learning’

TLRP's overarching aim:

‘to lead to significant improvements in **outcomes for learners** ...

... at all ages and stages in all sectors and contexts of education and training, including informal learning settings, throughout the United Kingdom’.

Main features in 2009

- Four times larger than anticipated (£43m, 100+ investments, 700+ researchers projects up to £1.5m each, often with large teams)
- HEFCE and RC funding (+ *all* UK governments & JISC)
- All sectors of education (pre-school to elderly learners)
- UK-wide (England, Wales, Scotland, N. Ireland)
- Directors' and Office Teams,
with a developed organisational infrastructure
- Capacity building (with BERA, SERA, AERS, SRHE, etc)
- Ended, reported and under evaluation (but TEL extension)

Early user engagement and partnerships



Teachers discuss a new project in Northern Ireland

Cardiff Showcase

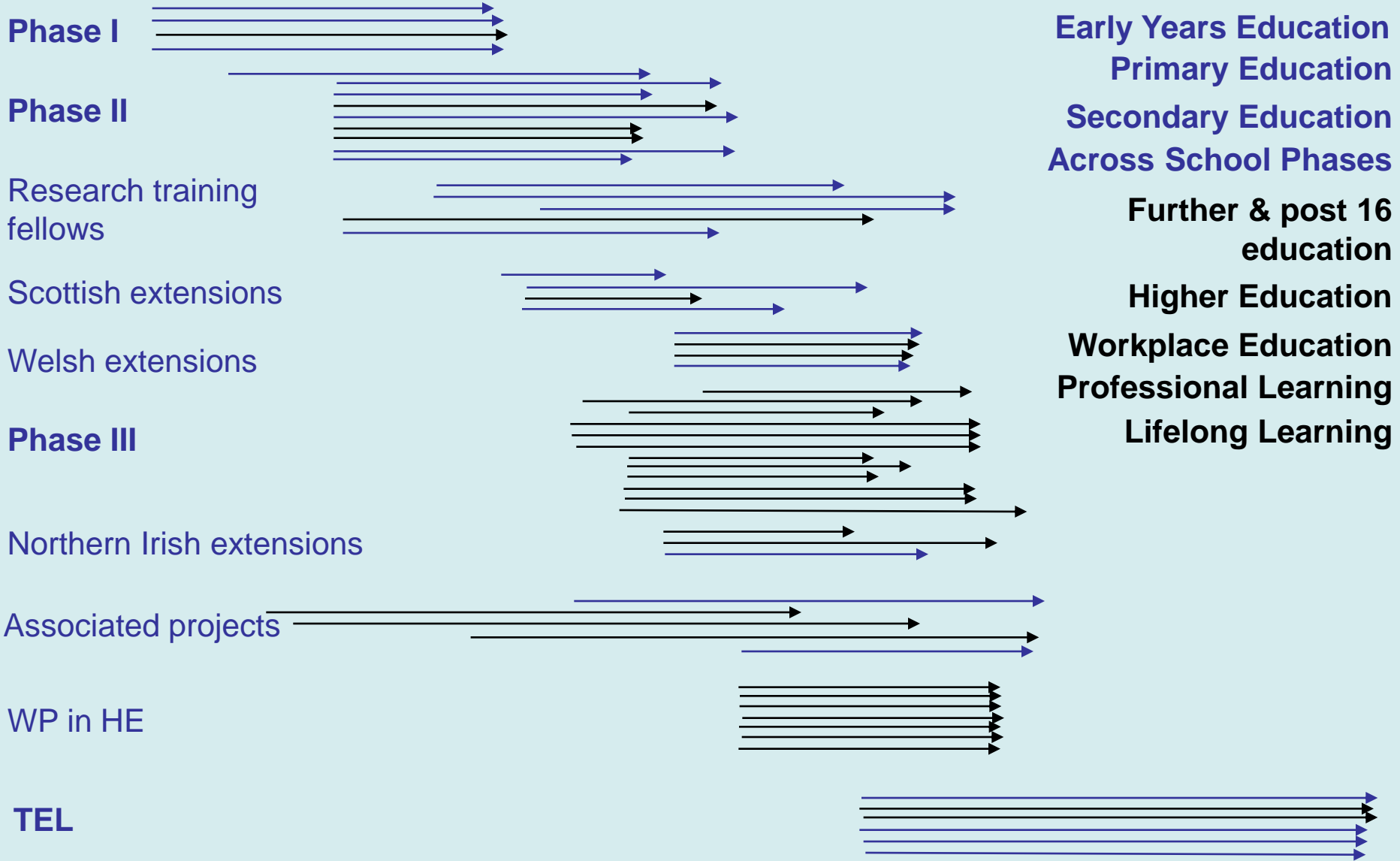


Belfast Showcase



Sectors

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011



Curricular questions

How can mathematical understanding be best developed?

Does evidence-based practice in science education improve outcomes?

How might the teaching of spelling be improved?

How can ICT support teaching to enhance pupil learning?

Pedagogic questions

How can group-work be developed most effectively?

Does developing thinking skills improve children's work?

Does 'learning how to learn' enhance performance?

Does pupil consultation produce educational benefits?

Broader questions

Which forms of early years provision are most effective?

Does home-school knowledge-exchange improve learning outcomes?

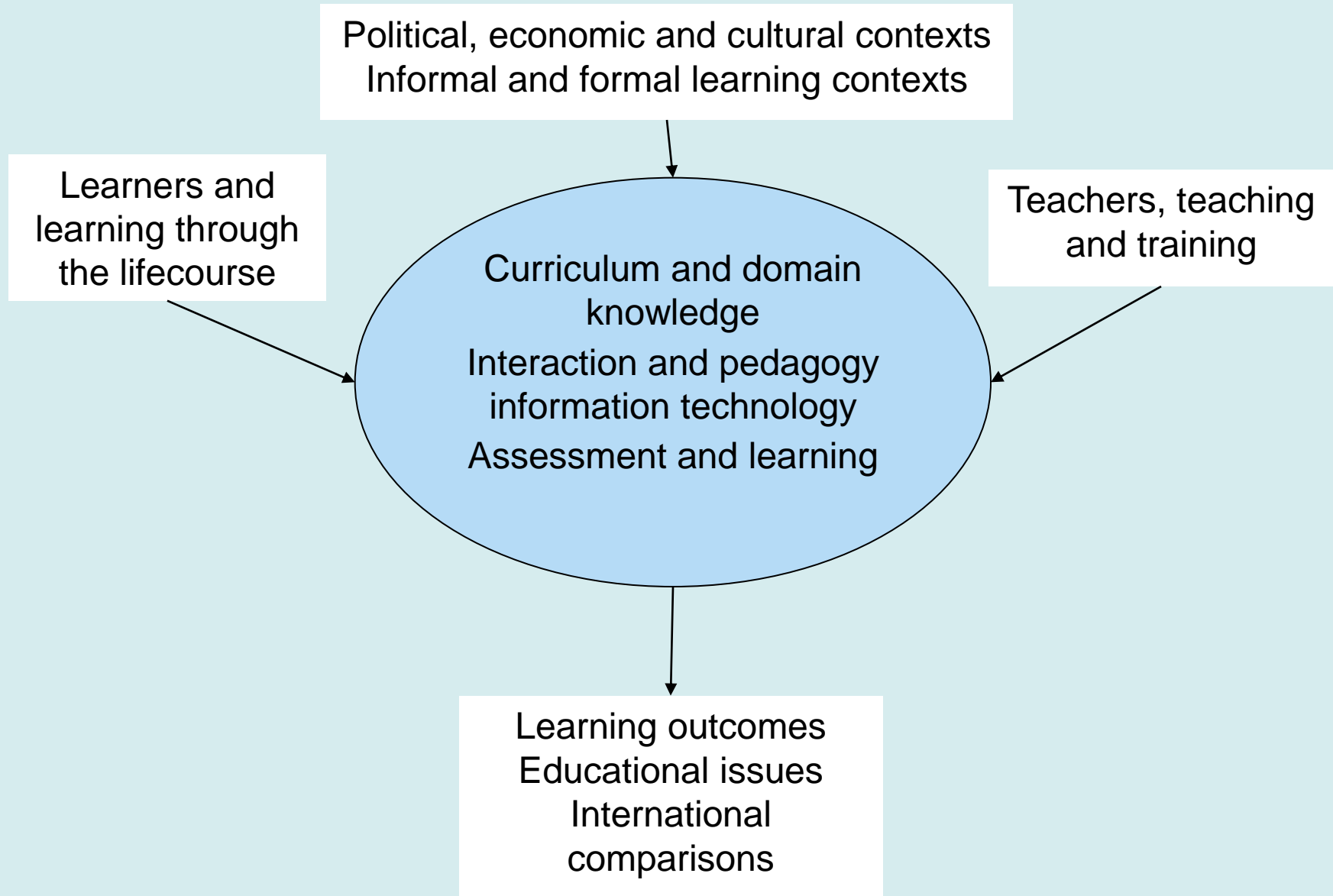
How do institutional cultures affect learning?

Can social inclusion and 'performance' be reconciled?

Teaching and Learning Research Programme

T·L·R·P
TEACHING
& LEARNING
RESEARCH
PROGRAMME

E·S·R·C
ECONOMIC
& SOCIAL
RESEARCH
COUNCIL



Knowledge synthesis by thematic work



A TLRP conference with research users

Knowledge synthesis by thematic work



Thematic group on diversity and widening participation

Knowledge synthesis by thematic work



Thematic seminar series on changing teacher roles, identities and professionalism

Knowledge synthesis by thematic work



Liaison with colleagues in European education programmes

Impact and significance



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Developing understanding of teaching and learning



As a contribution to evidence-informed policy and practice, TLRP has worked to enhance knowledge and understanding about teaching and learning across the life-course – as the topics in this leaflet illustrate.

The engaged learner

TLRP evidence shows that pupils learn best when they are committed to their own learning and know how to go about it. Teachers and schools provide the best opportunities when they use established principles of learning. These include pupil consultation, assessment for learning, thinking skills development and activities to promote positive learner identities. These need to be integrated into the curriculum so that learners develop a sense of agency and autonomy in their learning. TLRP projects have been influential in system-wide initiatives within and beyond the UK. They have affected England's review of teaching and learning methods for the future, 2007 Value, the recent curriculum review in Scotland and Northern Ireland, the Pedagogy Strategy in Wales, and initiatives in Hong Kong, Thailand, the Caribbean and elsewhere. TLRP's associated project on Effective Practice of Pre-School Education has provided the evidence for system-wide change in pre-school provision in the UK and beyond.

Innovative teaching strategies

TLRP evidence shows that teachers and teaching are the most significant factors in improving educational outcomes. At the core of teacher expertise lies the ability to scaffold learning in that supported learners are confidently able to perform their learning alone. Evidence suggests that explicit teaching designed to increase learner awareness of the learning process can produce general transferability to learning as well as gain in specific subjects. Projects on literacy and numeracy, learning how to learn, study skills, concept mapping and group work show various learning gains when this is achieved. These insights have been drawn into the centre of pedagogy innovation. They feature strongly in England's National Primary Strategy. TLRP's work on neuroscience and education revealed enormous media coverage in arguing for a cautious approach. Popularised neuroscience is seductive, but can be dangerous when prematurely applied in the complexities of classrooms.

Technology enhanced learning

Enhancing learning with technology requires much more than just the hardware and software. These are just tools. What matters is how their use is framed by skilled teachers to enrich learning experiences. In many schools for instance, guided interaction by teachers in support of children's ICT encounters significantly enhanced dispositions to learn, knowledge of the world and operational skills. Maximising the learning benefits of ICT thus requires reflective, reflective pedagogy which values pleasure and engagement as well as operational skill. Research has developed a compelling case for professional development in the use of ICT. While ICT can help learners engage with lesson content, this does not always happen in the way intended by teachers. Teachers must be aware of what one project calls the 'distance between "objectivity" and "intended" learning. Professional development which involves teachers designing and operationalising their own approaches to using ICT have been very successful. One TLRP project showed that 70 per cent of teacher-partners used ICT to enhance student learning.

Understanding literacy

Literacy is essential to individuals in contemporary society. But TLRP research shows that approaches to literacy that stress 'basic skills' fail to recognise that reading and writing are meaningful social practices. A study of the teaching of writing showed the importance of metaphors, units of meaning within words, rather than just phonemes, the sounds that make up the words, in achieving confident progress in spelling. In work on further education, everyday literacy capabilities were contrasted with the formal demands of courses. There is a tendency to underestimate learner capabilities, but the researchers and practitioners working together showed that there is enormous scope for unlocking neglected potential. A project on bilingualism in Wales produced similar insights. TLRP's message is an optimistic one: if literacy capabilities are understood, they can be built on to improve formal learning. In place of the tendency to alienate learners, there is the potential to engage them.

Teacher learning in schools and further education

Contented and resilient teachers are more effective practitioners, who enhance students' overall learning. TLRP research indicates that levels of commitment and resilience are influenced by many factors including teachers' own background, their initial professional education and education and the learning environment within which they are working. The nature of teacher learning varies during their careers, with cognitive processes being less significant than emotional and relational aspects during the early stages. An emphasis on formally focused learning outcomes often restricts teachers' professionalisation. The sectors in which the value underlying teaching are addressed varies across different contexts, but teacher identities are more positive where such matters are a common subject for professional discussion. It is important for teachers to be provided with opportunities to undertake reflective, collaborative, classroom-focused inquiry in order to develop a well-informed approach to their own learning and career. Initial teacher education and continuing professional development should aim to support teachers in this way.

Mathematical and scientific understanding

TLRP research shows that teaching of mathematical quantities in primary school focuses on abstract issues such as distance or price, but commonly neglects intuitive quantities such as speed, density or value for money. A more balanced teaching programme led to clear improvements in children's mastery of fractions. Another project developed diagnostic techniques to assess secondary students' understanding of core scientific topics, and findings were incorporated into national curricula topics. The project also created research-informed teaching interventions which significantly affected pupils' conceptual understanding. The need for deeper understanding was evident in workplace research too. One project showed that while 'rich mathematics' focuses on not easily applied work, they can be fostered by redesigning workplace activities to facilitate interactive approaches, making mathematics more visible. This research achieved remarkable success across manufacturing in helping workers understand multiple workplace processes. Important TLRP work is also being undertaken on mathematics identity and on the ways these impact on capability in higher education.



Transforming learning and teaching in further education

TLRP research in further education establishes the central role of the tutor-student relationship in meeting learner needs, particularly in helping disadvantaged, under-achieving and excluded people of all ages to develop the other half of their education as learners. It showed the importance of FE tutors in shielding learners from external policy turbulence in the sector. The TLRP's analysis of the weaknesses of the learning and skills sector's planning and target setting was widely accepted following evidence given by us to research on national policy reviews, parliamentary committee and the Learning and Skills Council. The message about relations between tutors and students being at the heart of successful FE has been endorsed by practitioners and those charged with implementing policy. It has been used by the Learning and Skills Network and the Learning and Skills Improvement Service as one of the pillars of the 're-orientation' of FE.

Informal learning and inclusion

TLRP research suggests that the structured nature of formal learning systems can have unintended excluding and restrictive effects. These often occur when the backgrounds and needs of learners are not adequately taken into account, but can be removed if more affirming inclusive and progressive approaches are adopted. For example, TLRP work on everyday learning at home shows how this can improve the effectiveness of learning at school; projects on school and staff strategies demonstrate how inclusion can be improved through organisational and classroom development; analysis of the experiences of students in further and higher education shows how these impact on participation; and the course analysis affirms the significance of culturally meaningful learning. The challenge for policy makers is how to provide learners with a flexible structure of formal provision which facilitates building on the cultural knowledge and personal capabilities from other spheres of learners' lives.

Technology and learning partnerships

The Technology Enhanced Learning phase of TLRP was launched late in 2007 with three large projects, and joined in Autumn 2008 by five more. Jointly funded by the ESRC and EPSRC, together with partners such as JISC, Becta and the Higher Education Academy, these projects will focus on the role of technology in four key areas: teaching, personalisation, flexibility, inclusion and productivity. These themes were first mooted some years ago by government and are key ways in which technology might repay investment. TLRP research will bring together interdisciplinary teams of computer scientists and social scientists, developers and evaluators, and designers and practitioners. Their work will investigate what kinds of design are effective in promoting these themes, and what types of learning emerge from them.

Widening participation in further and higher education

TLRP's evidence shows that the different funding options for post-compulsory further and higher education influence not only access for different types of student but also forms of curriculum and teaching and learning experience. TLRP's projects demonstrate that policy needs to focus on combining further and higher education as part of a common enterprise, narrowing the socio-economic, ethnic and gender gaps in university participation, and regarding the types of higher education accessed by diverse students. TLRP's projects have been influential in developing the kind of approach to understanding and implementing policy. They also provide a cautionary note for the development of equity and skills agendas. Partly of course because vocational and academic qualifications continue to be achieved, TLRP's projects are also influential in providing a strategic clear for the introduction of diplomas, and for combining academic and vocational qualifications to widen access to higher education.

Diversity and practice in further and higher education

TLRP's evidence shows that current notions of diversity are associated with non-traditional students, which leads to explicit, patronising and divergent adaptations to curricula and pedagogy. Students' own expectations, aspirations, and academic and social identities as learners are not fully valued in higher education. TLRP projects also show that teaching and learning approaches have excluded learners' prior experiences and particular needs. They demonstrate that inclusive programmes and pedagogies can have a positive impact on learning outcomes. Institutional designs that rely on efficiency or market criteria tend to have a curricula effect upon inclusive pedagogies and programme design. The development of inclusive and flexible curricula means that more adjustments need to be made for disabled, disadvantaged or other diverse students, and ensure fairness for all whilst ensuring the maintenance of academic standards. If we value inclusion, practitioners and policy makers should maintain high aspirations of students, while recognising the diversity of their needs, cultures and talents.

Subject teaching and learning in higher education

TLRP projects have examined the effects of mass higher education. Whilst there are now large classes, most diverse students and lower costs, there is also more interest in teaching quality, in student learning outcomes and in conceptions of learning. However, the quality of learning and teaching is predominantly shaped by subjects and their settings in different institutions. TLRP projects demonstrate strong differences between courses and institutions that relate not to the distinctive way of thinking characteristic of each subject but also to forms of pedagogy and to individual students' diverse identities. TLRP's message to universities is that they need to take account of a range of student orientations and types of academic or personal engagement. Policy priorities for knowledge, skills and employability are not in line with the priorities of many students. Clearly requires that the very different needs of students be addressed in teaching and learning strategies.



Workplace learning in the global economy

TLRP researchers have examined the impact of globalised production systems on opportunities for workplace learning and workforce development. Their analysis challenges the policy assumption underpinning national and European policy. The emergence within many countries of skills wide incorporating low, medium and high skills and eroding national boundaries means that China, India, the U.S., Germany, the UK and other countries will all share high-skills work. This analysis challenges the assumptions of the European Labour strategy of aiming for a high-skilled, high-pay economy. Highly skilled work is likely to be widely shared around the world. The UK should focus upon supporting the breadth and depth of learning at all levels of education and training, with a premium on learning to learn, creativity and supporting the learning of others. This analysis has been widely promulgated in national and European policy contexts and will feed into the 2010 review of the 'Labour Agenda'.



Adult learning, policy and accreditation

TLRP researchers focused upon the development of skills in the workplace. Achievement here depends partly upon the quality of the workplace as a learning environment, and on the extent of challenge in the work itself. Learning at work can encourage employees to engage in further learning and employable workers. But research evidence questions whether motivation to learn at work is always primarily economic. Accreditation policies and targets do not always reflect the 'distance travelled' by some learners and the possibility of learning slipping back if they are not fully appreciated and encouragement to continue their learning and development. The researchers achieved extensive engagement with policy-makers and practitioners. In one instance, changing how knowledge is represented led to breakthroughs in understanding underlying processes at work, in the case of statistical process control. They have been taken up by major employers and are now used on a global scale.



Professional and organisational learning

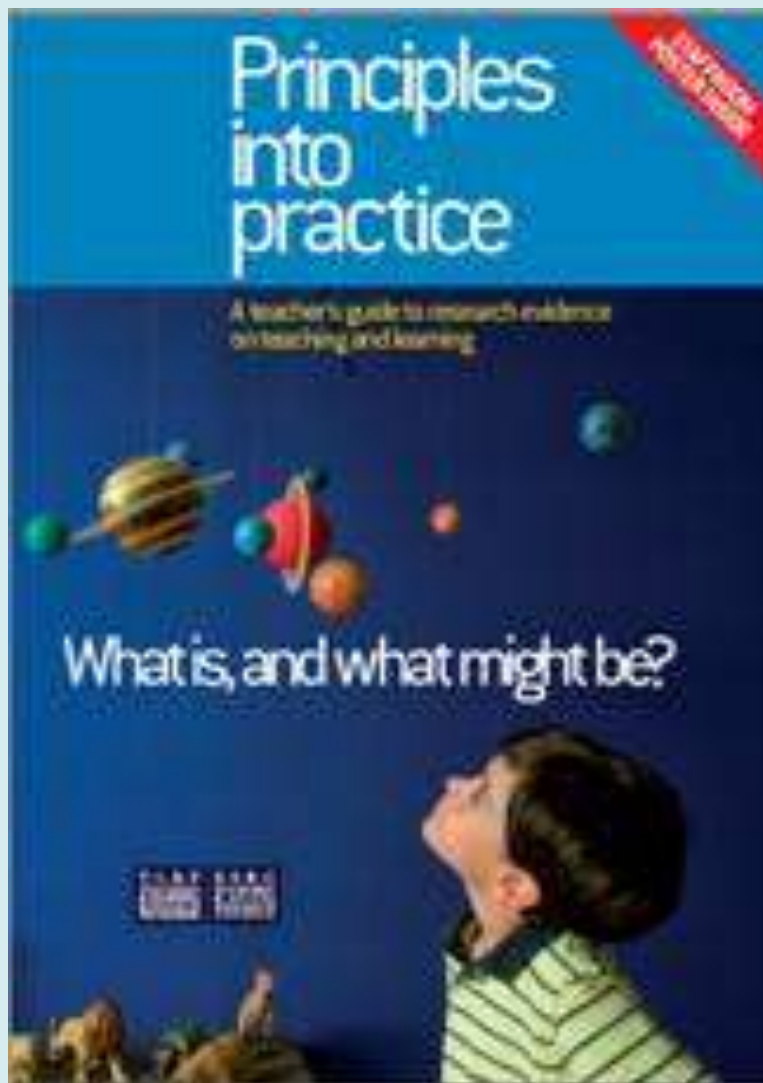
While feedback and support are important in early career learning, challenges at work act as a stimulus to continuing learning at all stages of a career. TLRP research found that collaborative learning and development are key to progress in particularly challenging learning environments, such as those associated with inter-agency and multi-professional working. Organisations are increasingly recognising the importance, particularly for team working, of employees who are skilled in supporting the learning of others. Organisations vary in how they approach training and workforce development, which can constrain or facilitate opportunities for learning at work. The work of TLRP researchers in this area has informed national policy reviews, parliamentary committees, sector-led councils, professional bodies, and the professional development underpinning the reorganisation of children's services in over 50 local authorities.

Learning through the life-course

TLRP projects have investigated individuals' experiences and perceptions of learning through the life-course. These projects have demonstrated the importance of learning to the voices of adults, who are the current target of government policies to increase and widen the take-up of qualifications. The TLRP's evidence challenges the economic imperatives that underpin current policies and demonstrates the importance of understanding learning across the life-course in terms of meaningful biographies. The TLRP message is that learning cannot easily be divorced from its personal, cultural and contextual meaning. If employers were able to combine work-related but potentially meaningful provision, lateral learning demand could be released. There is an unmet need for professional interest, advice and guidance for adults on the social and economic benefits of post-compulsory education and how to access it, especially across and within generations of adult learners.

Targeted outputs and impact initiatives





Why *'evidence-informed principles'*?

- affirms a holistic approach to teaching and learning or pedagogy
- represents cumulative evidence and experience
- supports contextualised judgement by teachers, tutors, practitioners and policy-makers

1. EQUIPS LEARNERS FOR LIFE IN ITS BROADEST SENSE



SOME TLRP EVIDENCE

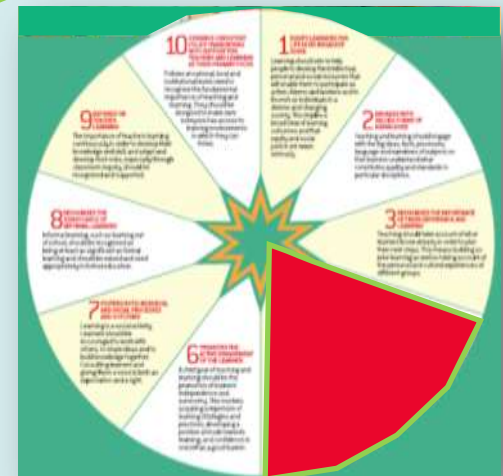
- Broad conception of 'outcomes' to include, for instance, engagement with learning (Ainscow), learning how to learn (James).
- Learner identities studied longitudinally, related positively to self-confidence, resilience and outcomes but demonstrated significant processes of social differentiation (Pollard, Biesta).
- Promotion of thinking skills (McGuinness) shown to have a positive relationship with attainment and effort, although the effect needed time to build and was not uniform across all learner groups.
- Most projects show the importance of developing learning awareness, explicit learning practices, positive learning dispositions, and learning autonomy (Nunes, McGuinness, James, Blatchford, Hughes).

SOME TLRP EVIDENCE

- In numeracy, understanding of rational numbers (proportion and ratio) is important but difficult for primary pupils to master. Relatively small teaching sequences can boost achievement (Nunes & Howe).
- In literacy, spelling improved through explicit teaching about rules of morphology (units of meaning) (Nunes). Bilingualism, when embedded, enriched teaching and learning in FE (Martin-Jones).
- Teacher review of assumptions about prior knowledge and experience of certain groups of children often led to improvements (Ainscow - inclusive practice; Hughes - home-school knowledge exchange; Plowman - ICT in early years; EPPE - pre-school settings).

4. REQUIRES THE TEACHER TO SCAFFOLD LEARNING

5. NEEDS ASSESSMENT TO BE CONGRUENT WITH LEARNING



SOME TLRP EVIDENCE

- Projects showed the importance of the way teachers plan and structure activities during lessons, negotiate goals, support classroom dialogue and provide feedback.
- Teacher roles in scaffolding learning with ICT were crucial (Plowman; Sutherland). Use of ICT can produce gains in achievement (Bevan), but only with effective mediation (Kennewell).
- Testing that focuses on factual recall often overestimates students' understanding of key concepts (Millar).
- Assessment for learning in the classroom is most effective when supported by whole-school collaboration and leadership (James)

**6. PROMOTES
THE ACTIVE ENGAGEMENT
OF THE LEARNER**

**7. FOSTERS BOTH INDIVIDUAL AND
SOCIAL PROCESSES AS OUTCOMES**

**8. RECOGNISES THE SIGNIFICANCE
OF INFORMAL LEARNING**



SOME TLRP EVIDENCE

- Group work projects (Blatchford & Christie) show the benefits of efforts to improve the quality of group work and children's mastery of cooperation and collaboration. Pupils made significant academic gains (effect sizes up to 0.6) which were seen across schools in different social contexts.
- Consulting pupils enhances self esteem and agency and improves learning opportunities (Rudduck, Leitch). However some pupils have more communications competence and are 'heard' more than others.
- Young people draw on school experience, and develop it at home, and bring home experience into school e.g. computer expertise (Sutherland).
- Home/school knowledge exchange activities impact positively on outcomes (Hughes). But this impact is mediated by social class, gender and attainment factors so there is need for sensitivity.

**9. DEPENDS ON
TEACHER LEARNING**

**10. DEMANDS CONSISTENT POLICY
FRAMEWORKS WITH SUPPORT
FOR TEACHING AND
LEARNING AS THEIR
PRIMARY FOCUS**



SOME TLRP EVIDENCE

- Levels of professional commitment and resilience are crucial to teaching quality and learner outcomes (Day).
- Through reflective inquiry *with* colleagues, teachers develop knowledge and beliefs about learning - as well as skills (James, Dudley).
- Visits from teachers in other schools, or from other departments/classrooms are valued for questioning assumptions (Ainscow). When senior management support innovation, it becomes more sustainable (Hughes).
- Consistency between national, local, school and classroom policy in teaching and learning is not always apparent.
- If policy was more congruent with pedagogic principles and supportive of contextualised teacher judgement, then school and teacher effectiveness could be improved.



Implications for policy and professional practice

Enhancing learning outcomes?

There is a compelling argument for progressive, cumulative and sequenced policies based on coherent knowledge of learning and pedagogy

TLRP's evidence-informed principles are intended as a contribution to a scientific foundation for policy and practice

The most cost-effective action probably lies in enhancing the expertise of teachers and other staff. The emphasis needs to be on the quality of contextualised professional judgement

Part 3

Teacher Professionalism and Reflective Practice

Professionalism

The essence of professionalism is the exercise of skills, knowledge and judgement for the public good.

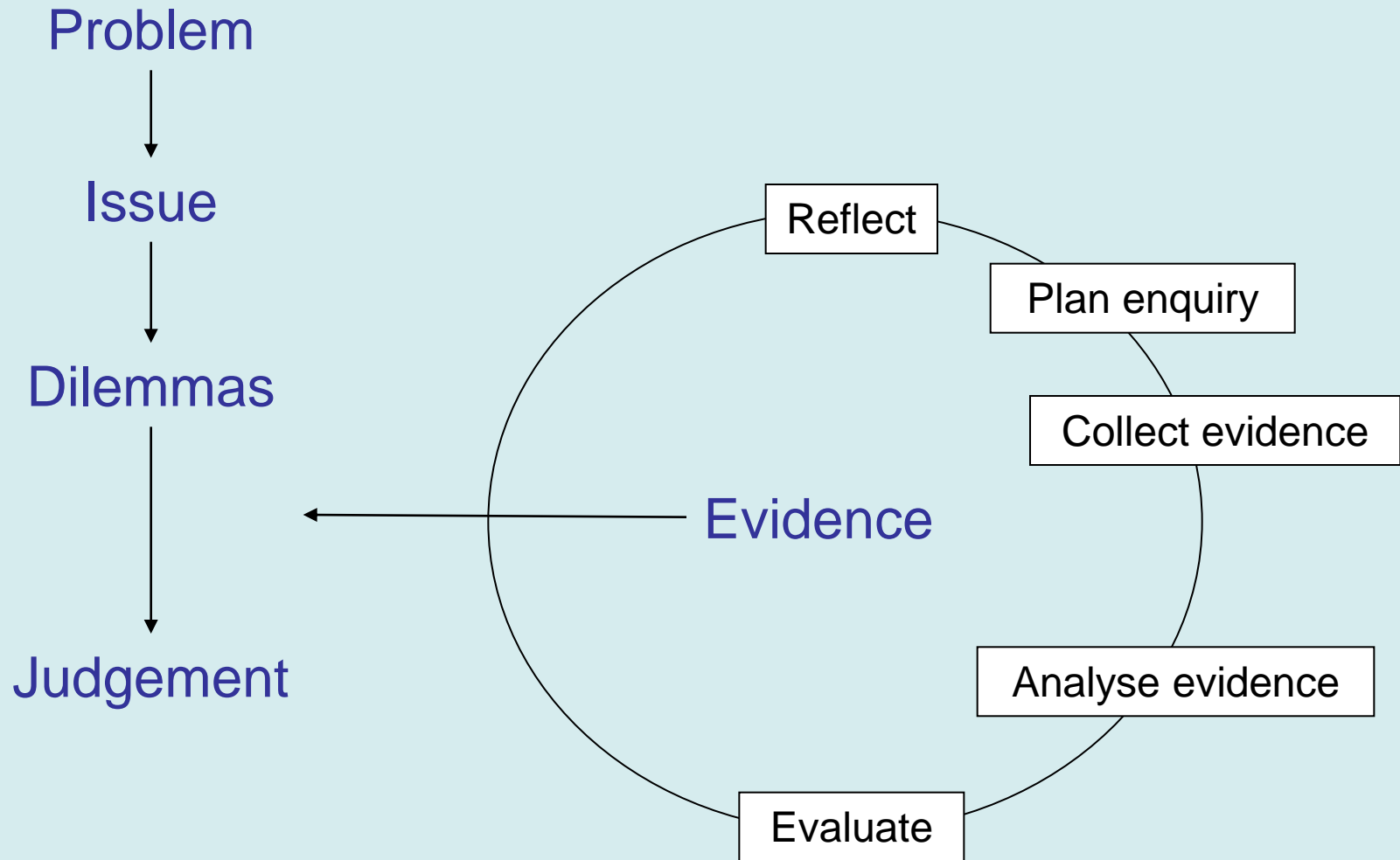
But teacher expertise is poorly understood in our societies

‘Pedagogy’ is the practice of teaching framed and informed by a shared and structured body of knowledge and combined with moral purpose.

Teachers should scrutinise and evaluate their practice to make rationally defensible professional judgements beyond pragmatic constraints and/or ideological concerns.

Routine and reflective action

- Using available evidence
- Personal classroom enquiries
- Collaborating with colleagues



Three judgements

- What aspects of classroom life to investigate and why?
- What evidence to collect and how?
- How should the findings be analysed, interpreted and applied?

Three challenges

- Is design of the enquiry appropriate in relation to the aim? (sample)
- Does the evidence *really* indicate the nature of what is being investigated? (validity) and would the same sort of evidence be found again, or by someone else? (reliability)
- Are the conclusions drawn really justified? (analysis)

How is this to be established?

For individual teachers

- Work collaboratively with colleagues if possible
- Use *occasional*, but explicit, classroom enquires as reflective learning experiences
- New insights can then be applied without special activities?

How is this to be established?

For teacher education systems:

- Establish consistent, evidence-informed reflective practice within initial teacher education, induction and professional development
- Link this to school development, to professional competences, staff appraisal and career development

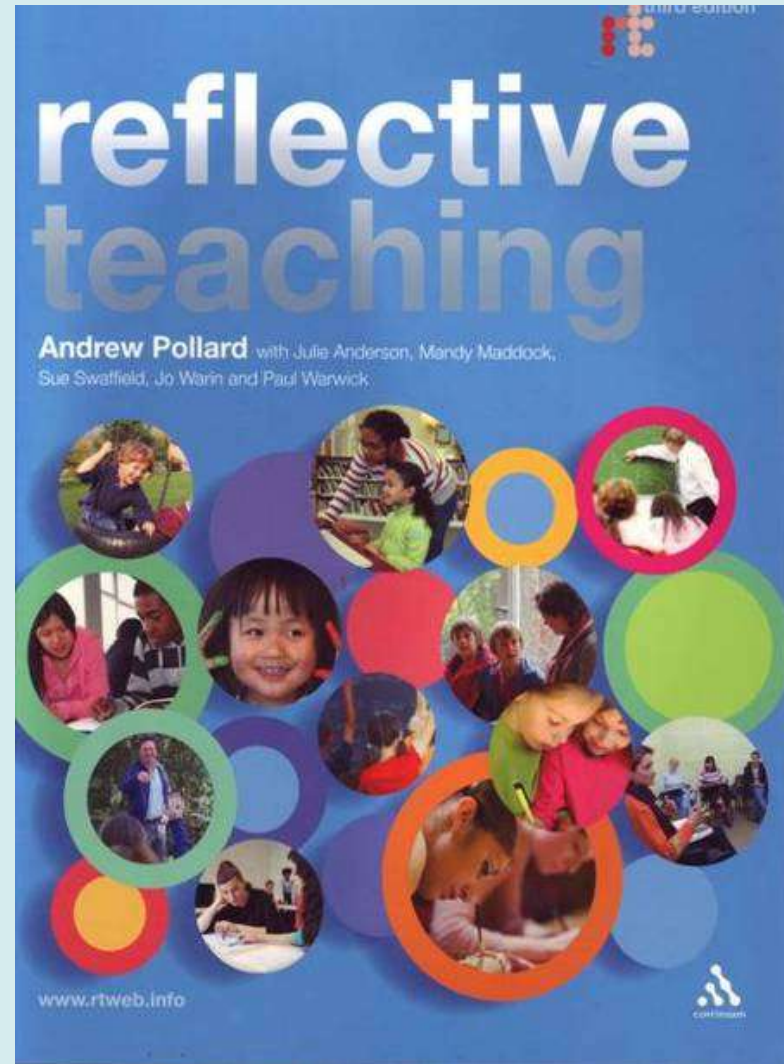
Reflective practice, towards:

- Strengthening the **shared professional language** for talking about teaching and learning that can stand up to scrutiny in terms of argument, evidence and values
- developing communities of **warranted practices** which contribute to the development of this language
- creating **confident public representations** of the theories, practices and language teacher expertise

Quality of learners' educational experiences	Curricular concepts	Pedagogic concepts	Assessment concepts
1. Society's educational goals	Breadth	Principle	Alignment
2. Elements of learning	Balance	Flexibility	Validity
3. Social context	Legitimation	Warrant	Dependability
4. Institutional context	Coherence	Culture	Challenge
5. Processes for learners' social needs	Personalisation	Relationships	Inclusion
6. Process for learners' affective needs	Relevance	Engagement	Authenticity
7. Processes for learners' cognitive needs	Differentiation	Dialogue	Feed-back
8. Outcomes for continuous improvement in learning	Progression	Reflection	Development
9. Outcomes for certification and the lifecourse	Effectiveness	Productivity	Consequence

Comprehensive
support on key
issues in teaching
and learning

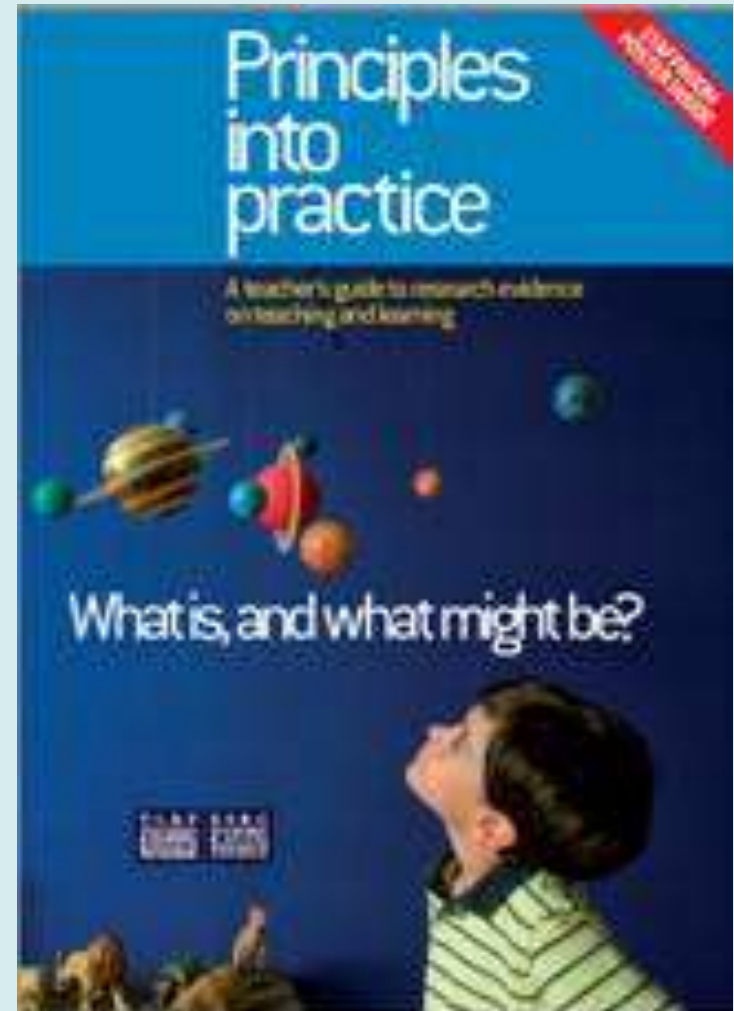
(including TLRP
Research
Briefings etc)



For more information:

www.tlrp.org

- Commentaries
 - Teachers' Guide to 'Ten Principles'
 - Resources for practitioner research
- www.rtweb.info
- Practitioner applications for classroom enquiry
 - Notes to guide reading



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The most effective teachers:

- **Recognise the complexity of teaching and learning**
- **Never stop learning themselves**
- **Enjoy teaching**

The most effective teachers:

- Recognise the *enduring issues and holistic complexity* of teaching and learning - **principles**
- Never stop *enquiring into their own practice and learning* themselves - **reflection**
- Enjoy teaching *and can balance their personal and professional commitment* - **fulfilment**

Challenges for teacher education?

What are the most significant contemporary challenges facing teacher education?

On what educational principles, should responses to these challenges be based?

www.rtweb.info

www.tlrp.org