Learning to Learn in Further Education

A literature review of effective practice in England and abroad

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CAMPAIGN
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Welcome to the Campaign for Learning

The Campaign for Learning was registered by the Royal Society of Arts in 1995 and became an independent charity in 1997. The Campaign is working for a society that recognises active participation in learning as the key to improving life chances, fulfilling potential and promoting citizenship. We run national campaigns, provide support for practitioners, run projects, undertake research and evaluation and lobby to influence policy. We have been running our Learning to Learn **action research** project in schools since 2000 and in FE since 2008.

The Campaign has undertaken research and evaluation work in recent years for a range of bodies from local authorities, government departments and TUC to KPMG, CfBT and the Tribal Group. For more information visit **www. campaignforlearning.org.uk**

The Campaign operates nationally and regionally in England through its four offices in London, Birmingham, Warrington and Wellington. It is funded from a mix of public and private sector contracts, Lottery and Trust funding and earned income from events, publications and consultancy.

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" … a process of discovery about learning. It involves a set of principles and skills which, if understood and used, help learners to learn more effectively and so become learners for life. At its heart is the belief that learning is learnable. "

Introduction

Learning to learn has been defined as:

'… a process of discovery about learning. It involves a set of principles and skills which, if understood and used, help learners to learn more effectively and so become learners for life. At its heart is the belief that learning is learnable.'

(Lucas & Greany, 2000, p5)

Metacognition – the process of reflecting on one's own learning – is central to learning to learn.

The Campaign for Learning (CfL) has been running the National Learning to Learn Action Research Project for nine years with the support of the Department for Children, Schools and Families. At the core of this research is the belief that an enhanced ability to learn can contribute to addressing issues in education and the world of work. Individuals who have not learned how to learn effectively, or who do not believe they can learn, continually gravitate to the bottom and miss out on opportunities at school, at work, at home and in the community. Helping such individuals learn how to learn more effectively can have positive results for the education system, the workplace, the economy and social justice.

The Campaign launched the Learning to Learn in Further Education (FE) pilot project in 2007 to investigate the application of learning to learn skills in the post-16 learning sector. The FE sector plays an important role in supporting and developing the skills of both young people and adults, and has been particularly successful in responding to the needs of people who have not achieved in school or who have negative previous experiences of learning. The Government has identified the sector as key in addressing the economic downturn, as well as in responding to a range of current issues, from sustainability through a sense of place to community cohesion. Recent policy changes are likely further to extend the range of learners the sector works with, with a continuing focus on engaging learners and delivering results.

In this context the potential importance to the FE sector of learning to learn becomes clear:

- Learners who have not learned how to learn effectively will find themselves limited in their future learning.

- Individuals who have been least successful in their earlier education are the most likely to miss out on learning to learn skills.

- These learners are also increasingly the cohort that FE is being asked to address.

- So learning to learn skills, which can improve performance, achievement and retention, can be a key to success for FE colleges.

Yet learning to learn approaches have not so far received the attention in FE that they have attracted in both the schools and Higher Education (HE) sectors, although elements of effective learning to learn practice are well embedded in the sector.

Aims of the literature review

This research aimed to review studies exploring effective learning to learn practice in the FE sector. The research sought to consider the following issues:

- Is effective learning to learn practice present in FE in England?

- How similar is post-16 practice in other parts of the world?

- How can current pedagogical/andragogical practice in FE be improved?

- What are the implications in the context of current policy developments in England?

Methods

The research identified and reviewed literature from England, with reference also to other countries with significant research in this field. Literature was reviewed to explore the impact of learning to learn, and to inform future research, intervention and policy-making in England.

The study was undertaken in the spring and summer of 2009, using a literature list from published studies over the past ten years

(1999 to 2009), using keywords to narrow the search for pertinent studies. The literature was analysed to explore definitions of learning to learn, current practice in England, examples of effective practice in the UK and abroad, and policy implications for England. Feedback was gathered from relevant stakeholders to inform and shape the research.

Defining learning to learn: conceptual and theoretical issues

Metacognition is at the heart of learning to learn, but learning to learn skills are difficult to develop in isolation. Metacognitive approaches tend to be embedded in models and frameworks alongside other behaviours, skills and attitudes to provide a better understanding of learning processes. So evidence of learning to learn approaches often needs to be sought within models and frameworks that are also effective in developing other learning skills, and some components of learning to learn may be found outside learning to learn models.

Relevance of learning to learn: contemporary issues in the FE sector

- Current opportunities and challenges, including accommodating 14–19 reforms and responding to the economic downturn, have placed great pressures on the FE sector.

- The sector has traditionally been successful in engaging those young people and adults who have been least successful in initial education.

- Learning to learn can be helpful here, both in helping learners understand previous bad experiences in terms other than personal failure, and in developing learners' capacity to learn, and to enjoy and value their learning.

- Historically there has been extensive academic research on the impact of differing pedagogic/andragogic approaches (defined as approaches to teaching young people and adults) in Higher Education, and a similar tradition has built up in the schools sector over the past 20 years, with increasing teacher involvement in research as part of professional development. By contrast, relatively few academic studies have focused on pedagogy/andragogy in the FE sector, and most have concerned adult rather than young people's learning.

- Professional Development in the FE sector has encouraged reflective practice, but its emphasis has tended to be on vocational updating and response to curriculum and qualification change rather than on broader issues and approaches. This has sometimes led to a lack of opportunity for staff to focus on effective teaching and learning in a broader context.

- Despite the limited evidence-based research, elements of learning to learn are well embedded within the FE system, and learning to learn approaches are implied in many developments in the sector in recent years.

- Successful teaching and learning, which are central to learning to learn practice, lie at the heart of colleges' effectiveness, are key to retention and achievement and a central focus of Ofsted teams during college inspections. The sector therefore has much to gain from an explicit focus on learning to learn.

Effective practice in England and abroad

Approaches to incorporate learning to learn into the FE environment need to include consideration of whether the approach is relevant in the FE context, how learning to learn approaches will be used across the curriculum and how they will be embedded in practice. This has substantial implications for the professional development of staff, including evaluation of the merits of differing approaches in delivering the FE curriculum.

Other issues to be addressed in the FE context include:

- Developing a language to talk about learning

- Developing critical thinking skills

- The effective use of peer interaction

- The effective use of flexible learning approaches, including resource-based and e-learning.

Five different learning to learn models were identified, from Australia, Belgium and England. They encompass the development of attitudes, knowledge and skills required for individuals to be confident learners in any context.

Policy implications

An increasing emphasis on quality and improving achievement and retention rates in FE within the context outlined above necessarily implies a need for more effective teaching and learning. Recently this has been coupled with a greater emphasis in the sector on listening to learners and using student feedback to achieve change. There has also been investment in initiatives to improve initial engagement and access to learning opportunities – for example, new developments in information, advice and guidance, e-learning developments and substantial capital investment. At the same time, there has been an increasing emphasis on the learner experience and effective teaching and learning.

Unfortunately there has been limited investment in research and this has not always been linked to professional development, with the result that evidence-based research is limited in the sector, and has had a limited role in the development of the FE curriculum and its delivery, in contrast to the picture in HE and schools. There is a need for a change of approach if the sector is to benefit from the potential of learning to learn approaches to enhance the performance of the sector in challenging times.

More broadly, greater involvement by young people and adults in learning in general, and in learning to learn in particular, at FE level has the potential to contribute to a range of public agendas including health and well-being, social justice and cohesion and employability. The adoption of a larger proportion of cross-cutting targets by Government, to which several Departments and their agencies contribute, incorporating post-16 learning, offers ways to address several economic and social agendas cost-effectively and coherently.

Conclusions and recommendations

Findings show limited evidence-based research about learning to learn in FE. The five models from England, Belgium and Australia identify skills, knowledge and attitudes required to develop learning to learn, with a range of tools and strategies which may be used to assist. Findings also included effective practices that are helping to develop learners' capacity to learn, although not delivered explicitly under the banner of learning to learn.

Government must acknowledge the key importance of effective teaching and learning throughout all learning phases in order both to motivate learners to continue learning throughout their lives and to equip them with the skills to do so. The importance of flexible, transferable 'soft' skills as well as vocational skills cannot be overestimated in the current economic climate. This report therefore recommends:

- Greater recognition at the policy level of the importance of developing effective cross-cutting pedagogical/andragogical approaches in FE

- Greater investment in continuing professional development (CPD) of staff in the post-16 sector to share good practice and ensure that all staff have the skills to deliver learning effectively to the wide variety of groups of learners with whom the sector engages

- Investment in evidence-based research within this context, including practitioner research and the development of an expectation that staff in FE will engage in research and reflective practice

- Consultation with educationalists along with other stakeholders on research and initial and continuing professional development in FE

- Promotion of the benefits that learning to learn approaches have brought in schools to policymakers and FE practitioners, and identification of strategies to link these to existing effective approaches – for example, through successful key skills, Resource Based Learning (RBL) and Personal, Learning and Thinking Skills (PLTS) delivery in FE

- Consideration by Government of the potential wider beneficial impact of adopting learning to learn approaches in all phases of the education system on a broader range of indicators including individual well-being, community cohesion and employability.

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1. Introduction

> *Learning to learn is about individuals understanding how they learn and developing their capacity to learn.*

The Campaign for Learning (CfL) has been leading the National Learning to Learn Action Research Project for nine years in schools across England and one year in Further Education, working with academic partners the Universities of Newcastle, Durham and Glasgow, and a cross-cutting Project Advisory Board.

We define learning to learn as:

'a process of discovery about learning (that) involves a set of principles and skills which, if understood and used, help learners to learn more effectively and so become learners for life. At its heart is the belief that learning is learnable.'

(Lucas and Greany, 2000, p5)

Learning to learn is about individuals understanding how they learn and developing their capacity to learn. It involves developing a range of skills and dispositions – amongst them self-organisation, communication, teamwork, reflectiveness and self-awareness – and learners taking responsibility for their learning and participating actively in designing it. Understanding how individuals learn involves exploring the application of metacognitive skills to help learners reflect on and improve their performance, as well as a range of other factors.

The aim of learning to learn is to develop lifelong learners who are capable and motivated to learn throughout their lives, thereby raising achievement and increasing enjoyment of learning. Lifelong learning is key to developing individuals' capacity so that they can respond and adapt to change through the development of transferable skills and aptitudes. Lifelong learning has become an important education and training focus in many countries, as part of Government's agenda to develop flexible learners who can adapt to changes in the economy and in working contexts. The UK Government has identified a central role for FE in responding to the current economic downturn, as well as addressing many other current issues. Responding to these broad issues at the same time as responding to recent system changes, including the 14–19 reforms and the raising of the learning participation age to 18 by 2015, while also driving up retention and achievement, will be a challenge for the sector. These changes place greater focus on the importance of developing effective models to engage with and deliver learning to post-16 learners, both young people and adults.

The Campaign launched the Learning to Learn in FE pilot project in 2007 and found limited research had been undertaken in this field. There have been many initiatives that seek to develop skills and dispositions involved in learning to learn in the sector, but most have not explicitly adopted a learning to learn model, and there is limited research evidence of the impact of these approaches in FE. In 2008 the Campaign was commissioned by CfBT Education Trust to undertake this literature review to explore learning to learn in FE, with a view to identifying research already undertaken on effective practice in England and elsewhere. Its purpose was to provide an up-to-date review of literature exploring learning to learn in post-16 learning in England, with reference to relevant international studies. It sought evidence of effective learning to learn practice in the FE sector in England and elsewhere in the world, to identify how practice might be improved in order to support successful learning to learn approaches in future, and to identify the policy implications for England.

2. Defining learning to learn: conceptual and theoretical issues

> *Cognition and metacognition are closely linked concepts that seek to understand an individual's thinking processes.*

2.1 Defining learning to learn

The central principle of learning to learn is that learning involves skills that can themselves be learned, and that we can all therefore become better learners. Learning to learn depends on 'a set of principles and skills which, if understood and used, help learners to learn more effectively and so become learners for life.' (Lucas and Greany, 2000, p5). These approaches aim to ensure learners are:

- ready to learn in any context and at any age

- able to tailor their approaches to learning to different contexts, appropriate to their individual needs and strengths

- confident about learning something new

- able to undertake independent learning

- able to learn from others and undertake effective collaborative learning.

Learning to learn approaches view developing learning capabilities as a prerequisite for further learning by improving study skills and habits, or by improving specific underpinning skills (e.g. Higgins, Baumfield and Hall, 2007, p5). This is increasingly important at a time when information is easier to acquire through technology, but where learners need to know how to evaluate, assess and integrate such information to be able to make effective use of it.

Metacognition (reflection on and regulation of cognitive processes) lies at the heart of learning to learn. Cognition and metacognition are closely linked concepts that seek to understand an individual's thinking processes. The distinction between the two concepts is that cognition describes the process of thinking, including an individual's habitual mode of problem solving, perceiving and remembering (Cassidy, 2004, p420), whereas metacognition refers to one's ability to regulate cognitive processes, as typified by Flavell's (1979) 'thinking about thinking' conceptualisation of metacognition that is used in many studies (for example, Noushad 2008, Vukman 2005 and Higgins 2003).

2.2 What are the characteristics of metacognition?

Coutinho and Neuman (2008, p132) describe metacognition as a 'higher-order' mental process that enables individuals to monitor and plan their learning, analyse their own performance, and identify skills and strategies required to undertake tasks. There is a strong emphasis on self-appraisal and self-management of cognition: self-appraisal will enable the learner to reflect on their own understanding, abilities and affective state during the learning process, and self-management enables mental processes to facilitate problem-solving (Noushad, ibid, p5). There is also a strong emphasis on 'regulation' that makes it superior to cognition. Coutinho and Neuman (ibid, p132) dissect the concept of metacognition into two components: knowledge and regulation. The former refers to knowledge of cognition and latter refers to activities that control one's thinking and learning.

The predominant characteristics of metacognition are monitoring, planning, evaluating and regulating one's thinking processes. Vukman (ibid) describes a combination of metacognitive experiences to aid problem solving such as feelings of difficulty, evaluation of solutions and identification of strategies.

2.3 How does metacognition improve the learning process and develop effective learners?

Metacognition improves the learning process by aiding task completion and problem-solving activities. It allows for comparison and evaluation of teaching and learning styles and preferences, of the impact of differing environments and varying subject content, and for balanced assessment of their appeal, appropriateness and usefulness for the individual learner in the specific context. It places learners in control of their own learning and develops their capacity to improve their

own learning processes to become more effective learners as time goes on.

Lucas *et al* (2003, p15) identify the key characteristics needed for effective learning as:

• Being ready for learning

• Being able to set and achieve goals

• Knowing how to learn best

• Harnessing creativity

• Being able to reflect, adapt and change.

Metacognition underlies the last of these but is also crucial to most of the others – setting and being aware of how to achieve goals, knowing how to learn best (which depends on the ability to reflect on one's own aptitudes and preferences) and appropriate preparation all imply the self-awareness, higher order processing and planning that metacognition involves.

2.4 Can metacognition by itself improve the learning process?

Although metacognition is at the heart of learning to learn, it does not exist in isolation. Individuals develop metacognitive skills in context, and metacognition takes place alongside other behaviours, skills and attitudes. Noushad (ibid, p9) argues that success in learning and development depends not only on metacognition but also on motivation, self-efficacy and the value placed on learning. Tovar (2008), from an adult learning perspective, asserts that competencies required for learning are: general understanding, basic skills, self-knowledge and educational process. Self-knowledge (understanding of oneself as a learner, which incorporates metacognition) is viewed as an important aspect of learning how to learn. Lucas and Greany (2000, p5) argue that learning to learn is concerned with raising individual achievement as well as, and partly through, increasing motivation. Claxton's (2002, p17) 4 Rs of Learning Power model embeds metacognition within the disposition of 'reflection', alongside other dispositions to improve learning:

• *Resilience* – being ready, able and willing to lock onto learning

• *Resourcefulness* – being ready, willing and able to learn in different ways

• *Reflectiveness* – being ready, willing and able to become more strategic about learning

• *Reciprocity* – being ready, willing and able to learn alone and with others.

Higgins (2007) and colleagues offer variations on this, in which Responsibility is added. Both models outline capabilities relevant for learning to learn, which are presented in Table 1 below.

In addition, both Higgins and Claxton state that other factors need to be taken into consideration when developing learning to learn approaches, including:

• learning environment

• individuals' knowledge of a vocabulary to articulate their reflections on the learning process.

These models and frameworks demonstrate that a holistic approach is required to develop effective learning to learn behaviour. Five different models of learning to learn are considered in more detail at the end of this chapter.

2.5 Critical thinking skills

Critical thinking skills are an essential aid to developing and deploying cognitive and metacognitive skills through analysis, interpretation, inference, induction, deduction, and evaluation (Yeh, 2009, p187). Critical thinking skills encompass a wide variety of skills including identifying assumptions, making value judgements, analysing arguments, and asking and answering questions of clarification (Anderson *et al*, 2001, p2). These will aid individuals' critiques of their own work as well as others', so they are able to make value judgements about their learning progress – for example, identifying what they need to learn and what they need to improve.

Moseley and colleagues from Newcastle and Durham Universities (2004; 2005) identified 35 theoretical thinking skill frameworks for post-16 learners that classify the skills and abilities required for thinking. These include frameworks

Table 1: Crosscutting skills, knowledge and attitudes identified as necessary for learning to learn

Skills	Knowledge	Attitudes
Self-direction Ability to plan, monitor and evaluate learning.	**Understanding self as a learner** Aware of strengths and weaknesses as a learner, and thus how to learn best.	**Motivation** Motivated to learn in any context, to continue learning despite negative outcomes and learning to adapt to change.
Communication and interpersonal skills Undertake collaborative learning, learn from others.		**Self-esteem** Confident to learn something new in any contexts, and to approach learning tasks.
Basic skills Including basic literacy skills and ICT. Thus can use a variety of resources (e.g. print, ICT) to find appropriate information.		**Risk-taking** Confident about experimenting with new approaches to learning. Not anxious about failing or giving incorrect answers.
Language skills Can articulate their learning process, their needs and discuss learning with others.		**Empathy** Support peers in their learning. Listen to and understand their opinions.
Organisational skills Organise study time to meet deadlines.		**Perseverance** Perseverance to work through stress and pressures of life. Not to be deterred by negative outcomes e.g. poor examination grades.

to aid metacognition and improve individuals' understanding of self as a learner, e.g. strengths and weaknesses, thus helping them 'monitor, question and critique their thought and learning processes and behaviour, which will improve their self-confidence and give them more control over their learning' (ibid, p120). Their study includes a five-category framework that classifies five different types of thinking skills required to develop and utilise key skills necessary for working with others, improving own learning and performance, and problem solving (Moseley *et al*, 2004, p48). This framework, presented in Table 2, provides teachers and learners with a better understanding of the relationship between thinking and learning, and can be used as a tool for planning and evaluating courses and curricula.

Table 2: Percentage distribution of five types of thinking within each skill

	Communication	Number	Information technology	Working with others	Improving own learning and performance	Problem solving
■ Strategic management of thinking	1%	1%	2%	10%	6%	9%
■ Reflective thinking	6%	4%	5%	14%	25%	10%
■ Productive thinking	36%	33%	40%	53%	36%	59%
■ Building understanding	51%	59%	49%	22%	25%	19%
■ Information gathering	6%	4%	4%	0%	8%	3%

Source: Moseley *et al*, 2004, p48

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From their research in Scotland, Anderson *et al* (2001, p 4 and 6) advocate the benefits of peer interaction for developing argumentative critical skills, in the form of dialogue and written work, in adult subjects to provide evidence for their own theory, consider alternative theories, provide counter-arguments and write reports. Findings from their research show that critical skills can be improved with guided practice:

> *'pattern of correlations suggest that students who are proactive in the dialogues (by asserting their point of view, justifying themselves with anecdotes, chairing, and agreeing and disagreeing with their peers) are more likely to produce justifications in their written work.'*

(Anderson *et al*, 2001, p19)

2.6 Learning styles

Personalising the learning process is an important outcome of the learning to learn approach, acknowledging the fact that learners have different styles of learning as well as different attitudes, experiences and motivations. Evidence shows that an individual's identity as a learner and personality will influence their approach to learning and how they are best taught. For example Colley (2003, p4) asserts that teachers adapt their pedagogy to the habitus (physical and constitutional characteristics of learners) rather than to general ability levels. Learning to learn can address learners' diverse learning styles and needs, empower learners to take ownership of their own learning and help them develop the skills to do so.

Moseley and colleagues have considered in some detail the issue of individual learning styles and how these interact with metacognition (Coffield *et al*, 2004; Hall and Moseley, 2005). The team identified five families of learning styles theories:

- Constitutionally-based learning styles and preferences – theorists argue styles are fixed or very difficult to change: they 'refer to genetically influenced personality traits; or to the dominance of particular sensory or perceptual channels, or to the dominance of certain functions linked with the left or right halves of the brain' (ibid, p12)

- Cognitive structure – theorists focus on the interactions of cognitive controls and processes. They argue that styles are linked to particular personality features, but cognitive styles are deeply embedded in personality structure (ibid, p36)

- Stable personality type – theorists argue that learning style is one part of a relatively stable personality type. They are 'concerned with constructing instruments which embed learning styles within an understanding of the personality traits that shape all aspects of an individual's interaction with the world' (ibid, p47)

- Flexible stable learning preferences – the Learning Style Inventory, developed by David Kolb, is one of the most influential models of learning. He argues that learning style is not a fixed trait, but changes slightly in different situations (ibid, p61)

- Learning approaches and strategies – some theorists focus on approaches and strategies instead of styles. They argue that underlying personality differences and relatively fixed cognitive characteristics determine the strategies and approaches used by the individual and the cognitive strategies they will adopt (ibid, p91).

In educational practice, learning styles theory has gained a mixed reputation, as teachers and learners can use this information in ways that limit rather than expand learners' opportunities. Some theorists continue to conceptualise learning to learn as simply a learning styles approach, without appreciating its full scope and basis in metacognitive research.

3. Models of learning to learn

"These models should, therefore, help us gain a range of perspectives on what may constitute effective practice in learning to learn regardless of context, and should be applicable to FE as to all other learning environments."

This research has identified five models of learning to learn from Australia, Belgium and the UK. These have been developed in different contexts: one model from Australia was developed for adult learning and the other for vocational education with young people and adults, the Belgian model for teacher training, and the UK models for schools (although one is currently being piloted in the FE sector). Their developers, however, point out that by their nature they are transferable – for example, between age groups and learning environments or to incorporate any type of subject content. These models should, therefore, help us gain a range of perspectives on what may constitute effective practice in learning to learn regardless of context, and should be applicable to FE as to all other learning environments.

3.1 Australia: Cycle of learning to learn

The Australian Adult Education Resource and Information Service (ARIS) has developed an explicit model of learning to learn, and has produced a learning to learn information sheet (2000, pp3–4) to encourage learners to focus on 'how' they learn (process) in addition to 'what' they learn (content) (see Diagram 1). ARIS's model is cyclical and involves:

- reflection – the way adults consider and respond to their learning
- integration – using activities e.g. group discussion and brainstorming, to connect existing ideas and feelings, followed by identifying patterns, classifying or grouping ideas that emerge
- validation – how learners test out theories through discussion and observation
- further reflection
- appropriation – of ideas, skills and behaviours deemed valid and accepted as existing knowledge and/or practice.

Key features of this model are replicated in recognised adult education practice in the UK and elsewhere, including the emphasis on reflectiveness and integration of new learning with the learner's existing knowledge and skills, and the importance of learning through interaction. (See, for example, texts for professional development programmes for adult educators, such as Rogers, 2002.)

Diagram 1: Cycle of learning to learn
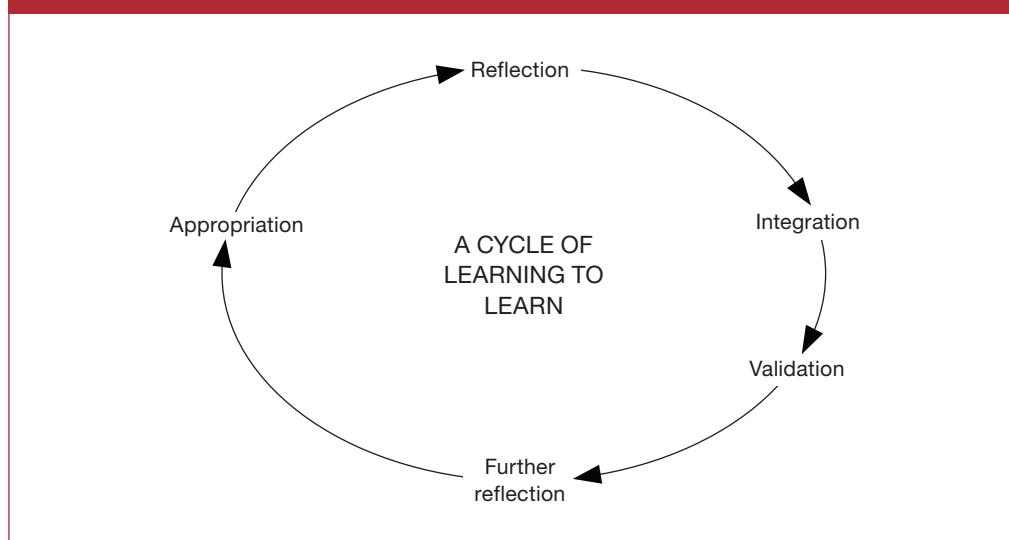
Source: ARIS, 2000, p4

3.2 Australia: Clusters of key generic capabilities

Kearns' Australian model (2001, p49) is the only one our research has identified that was developed in vocational education, which many would regard as the central focus of FE. It is based on the belief that teaching skills or knowledge content is not sufficient without developing 'mental capabilities' that create these skills and knowledge. Thus the following framework of overlapping capabilities was developed to facilitate ongoing development of key skills in vocational education, and to show clear interactions between these skills (see Diagram 2).

We will return to consider aspects of this later when we look at key skills development in FE.

Sanguinetti, Waterhouse and Maunders (2005, p279) built on Kearns' framework to develop a framework for delivering generic skills and attitudes in the context of adult and community education (ACE) in Australia. Their model includes the following four dimensions:

- Teacher (the personal, social, and attitudinal values and characteristics of ACE teachers)

- Teaching (i.e. the practices, approaches, methods, strategies and purposes)

- Curriculum (including content, purposes and approaches to assessment), and

- Place (the geographical, social and institutional contexts of ACE).

The framework seeks to apply a holistic approach to individuals' personal, intellectual and social development.

3.3 Belgium: Eight Learning Events Model (8LEM)

The Eight Learning Events Model (8LEM) demonstrates that teaching and learning is a combination of learning events, and describes eight documented ways of teaching and learning to encourage diversification of pedagogical approaches. It describes the complementary and interdependent relationship between the learner and tutor by presenting two sides of each of the pedagogic practices (Leclercq and Poumay, 2005, p1.)

This model was not designed as a learning to learn model, but it incorporates significant

Diagram 2: Clusters of key generic skills

- Basic skills
- Using technology
- Practicality
- Business of orientation
- Planning and organising
- Activities

- Work readiness and work habits

- Enterprise
- Innovation

- Autonomy
- Self-direction
- Personal mastery

- Enterprise
- Entrepreneurship
- Innovation
- Creativity

- Communication
- Team skills
- Customer service
- Cultural understanding

- Interpersonal skills

- Learning
- Thinking and adaptability skills

- Learning
- Thinking
- Analytical capability and problem solving
- Systems thinking
- Adaptability

The interpersonal (or social) cluster with underpinning personal attributes and values e.g. emotional intelligence, self-understanding

The cognitive cluster with underpinning personal attributes e.g. willingness to learn, positive attitude to change and complexity, mastery of mental models

Source: Kearns, 2001, p52

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elements of learning to learn. Like the Australian cyclical model, it emphasises the roles of reflection, alone and with peers and tutors, and of interaction and debate. It stresses the exploratory, experimental, open-ended nature of many productive classroom interactions. At its heart is a reciprocal, shared relationship between teacher and learner in which both take responsibility for learning – a key feature of learning to learn. Where this model differs from learning to learn approaches is perhaps in its continuing emphasis on the teacher as leading and controlling the learning – the teacher is responsible for 'transmission' and the learners for 'reception', for example. In contrast, more specific learning to learn models have taken sharing and reciprocity one stage further towards shared leadership and the relinquishing by teachers of some degree of power and control, such that the learning process becomes more open-ended and exploratory. However, it should be pointed out that although learners in this model 'receive',

they are also responsible for 'exploration' and 'experimentation', in relation to which the teacher's role is to respond, support and record the learning taking place, so the model is by no means one-sided. Adult education teacher training texts (for example, Reece & Walker, 2004) have developed taxonomies of different types of classroom activity, ranging from models with greatest learner participation to those with least, and recommend a balance of activities, with a strong bias towards those involving substantial learner participation to promote engagement, encourage understanding and enhance motivation.

The eight 'Learning Events' or pedagogical approaches in this model are shown below in Diagram 3. The learner activity is shown in bold and the corresponding teacher activity in standard type.

- **Imitation**/modelling

- **Reception**/transmission

Diagram 3: Eight Learning Events
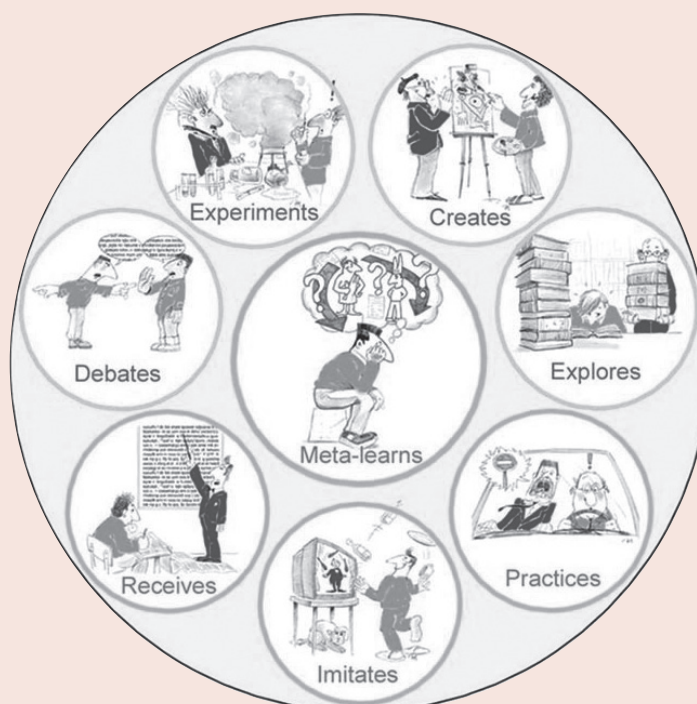
Source: Leclercq and Poumay, 2005, p3

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- **Exploration**/documenting

- **Self-reflection**/co-reflection

- **Debate**/animation

- **Creation**/confortation

- **Experimentation**/reactivity

- **Exercising**/guidance

3.4 UK – Four/Five Rs Models

These models centre on the work of Guy Claxton of the University of Bristol, whose '4Rs of Learning Power' model was first published in 2002. Claxton identified four 'dispositions', as he called them, which he suggested were essential to improve learning:

- **Resilience**

- **Resourcefulness**

- **Reflectiveness**

- **Reciprocity.**

The Campaign for Learning's '5Rs model' takes Claxton's work as its starting point. It is a disposition model based on skills, knowledge and attitudes that will improve learning. It shares three of the Rs of Claxton's model (resilience, resourcefulness and reflectiveness) but replaces reciprocity with two others, readiness and responsibility (see, for example, Higgins, 2007). These features are described by Wall *et al* (2009) as habits of mind, attitudes and motivation necessary for lifelong learning. A more detailed analysis of the skills, knowledge and attitudes which form the model and how these relate to each other can be found in Appendix 2. The model has been applied in schools in England as part of longitudinal action research project over the last nine years, and is currently being piloted in the FE sector in England.

This model uses a 'community of enquiry' approach (Higgins, 2006, pp5–6) to address issues. This approach includes teachers, parents and students in the community, encouraging them to cooperate, collaborate and learn from each other. Hall (in press) describes teachers as researchers engaged in ongoing cycles of inquiry (engaging in research)

and enquiry (engaging with research) to identify good practice to develop learning to learn skills. Thus professional-led enquiry through action research enables teachers to develop relevant, timely pedagogy to deliver learning to learn in different contexts. This is described by Higgins *et al* (2007, p21) as forming part of a 'cycle' of innovation, experimentation and contextualisation which continues throughout teachers' professional lives and interactions with students, and contributes to an ongoing process of developing and revising pedagogy and curriculum.

3.5 UK – Eight 'Learning Oriented Habits of Mind' Model

More recently, Claxton has developed his model further in conjunction with Bill Lucas, one of the contributors to the Campaign for Learning's early learning to learn models (Claxton and Lucas, 2008). They have brought together their thoughts in a new model that they have labelled 'the Magnificent Eight' – 'eight broad qualities or dispositions' which they propose as 'necessary to take advantage of lifelong learning'. They refer to these as 'Learning Oriented Habits of Mind' (LOHMs) – 'dispositions, self-beliefs and habits of mind that underpin a generally positive and open-minded attitude to learning' (ibid, p5). They are as follows:

- **Curiosity**, in which they include open-mindedness, enjoyment of discovery but also 'a healthy scepticism' in approach

- **Courage** (which covers being unafraid of uncertainty), persistence and determination, resilience and 'what sports coaches call *mental toughness*'

- **Skills in exploration and investigation**, incorporating information-gathering, observation, evaluation and concentration

- **Experimentation**, including trying things out, skills in redrafting and revising, effective use of practice and learning from mistakes

- **Imagination**, incorporating visualisation, making connections and altering perspectives, the ability to put oneself in others' shoes and 'a mixture of respect and scepticism for intuition'

- **Reason and discipline** – methodical and rigorous thinking, skills in planning, structuring and target-setting – but alongside a willingness to rethink plans and projects if appropriate

- **Sociability**, including both learning with and from others and creating the impetus to 'help group of people become really effective learning and problem-solving teams', and balancing social and solitary activity

- **Reflection**, incorporating self-awareness, a 'positive mindset' that enables the learner to view setbacks in context, the ability to step back and take stock, and the ability to

apply old and new knowledge and insights to a situation and to transfer expertise between contexts. Claxton and Lucas also include here possession of a vocabulary for discussing the process of learning – something Claxton previously identified as a separate prerequisite outside his earlier 4Rs model. We will return to this and related issues later.

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4. Historical background: Learning to learn and the education system

4.1 Developing skills and dispositions in schools

We will now consider how learning to learn, cognition and metacognition have been addressed within the education system. Claxton and Lucas (2008) argue that improvement in the schools sector in the UK has focused primarily on two aspects of education – the content of syllabi and the qualifications system. To these we would add a third – delivery structures, which have provoked wide-ranging controversy and debate over the past twenty years and more, including on separation of 'infant' and 'junior' phases, middle versus secondary systems, the 14–19 phase, the raising of the learning leaving age, sixth form structures, streaming and setting and single-gender versus co-education. As Claxton and Lucas point out, the UK school system has necessarily always developed certain skills and attitudes in learners, but these have been accorded little significance and only relatively recently become an explicit focus for educationalists. They argue that our system has for many years continued to develop skills and habits that do not match our current needs, and that this has changed very slowly:

> 'To put it very crudely, the habits of mind required, and therefore cultivated, by the 19th century curriculum of mass schooling were deference, unquestioning acceptance of authority, neatness, punctuality, accurate recapitulation and "sequestered problem-solving". In a variety of straw polls, we have so far discovered no one who thinks that these are the top-priority life skills for the 21st century.'
>
> (Claxton and Lucas, ibid, p8)

Interest in cognition in the UK education system grew with advances in psychology. Moseley (2005) points out that a strong interest in information processing accounts of cognition in the 1960s and 1970s increased the influence of behaviourist theories in education and training in the 1970s and 1980s. Lucas and Greany

(2000, p3) assert that interest in learning to learn skills came into education mainly from the corporate sector, which wanted to understand how people learned so that their learning processes could be accelerated. Metacognition first achieved widespread prominence in education in the 1970s through the work of Flavell (1979), whose approach was gradually incorporated into mainstream schools. An emphasis on content and knowledge over skills and aptitudes has, however, continued to dominate the education system until relatively recently, despite the efforts of educationalists such as John Holt in the USA, who pointed out as early as 1964:

> 'Since we cannot know what knowledge will be most needed in the future, it is senseless to try to teach it in advance. Instead, we should try to turn out people who love learning so much and learn so well that they will be able to learn whatever needs to be learned.'
>
> (1964, p37)

4.2 Learning and intelligence

Alongside a knowledge-centred approach has run a steady belief over many years in fixed, genetically-determined differences in intelligence which could be used as reliable predictors of attainment and have shaped education structures since systems based on ability to pay were replaced by meritocratic approaches. From the 11+ to today's Cognitive Abilities Tests, the emphasis has been on identifying pupils' 'ability' or 'potential' and gearing teaching to this. In this context, learning to learn approaches may appear heretical, as they suggest learning can be learned and that certain types of experience can help develop our mental processes, which intelligence theory generally sees as fixed and immutable.

More recent research suggests, however, that the relationship between heredity and environment is highly complex – for example, that effects on the body and brain that were

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initially environmental can then be handed down through several generations, while conversely one part of the brain can 'learn' to take over the functions of a differently specialised area that suffers damage (see, for example, Winston 2004). US educational psychologist Lauren Resnick of the University of Pittsburgh, a learning scientist who has studied the nature of learning both in and out of the classroom, argues that what we refer to as 'intelligence' is a bundle of capacities, many of them susceptible to change, and concludes:

> *'One's intelligence is the sum total of one's habits of mind.'*
>
> (1999, p38)

4.3 Skills and knowledge in the school curriculum

In England, in response to concerns about variability of curriculum content and standards between schools, a National Curriculum was introduced in 1988, in order to 'ensure that teaching and learning is balanced and consistent' (DirectGov website). It provided a framework of subjects to be taught, standards and attainment targets in each, the knowledge, skills and understanding needed to achieve these and means of assessment and reporting. Standard Attainment Tests (SATs) were introduced nationally to assess progress. Although there was stress on the freedom schools had 'to plan and organise teaching and learning in the way that best meets the needs of their pupils' (ibid) within the overarching framework, many commentators saw it as highly prescriptive, allowing teachers too little scope for professional judgement. For example, Institute of Education researcher John White commented in a national daily paper ten years later:

> *'The national curriculum we were given in 1988 committed schools to virtually the same 10 compulsory subjects as in the 1904 secondary regulations; prescribed what the content should be in extraordinary detail; and gave teachers next to no idea of what all these complicated arrangements were for – what purposes the national curriculum was meant to serve. It often seemed to have as much to do with keeping a firm rein on teachers as with helping pupils.'*
>
> (White, 1998)

Despite its references to skills and understanding, the Curriculum was heavily content-based, and its introduction had the effect of moving many schools further towards a simple knowledge-acquisition approach to the curriculum, while skills and learning to learn took a lower profile.

SATs have been controversial, attracting criticism for causing stress to both teachers and learners and placing too little trust in teachers' professionalism, as well as for encouraging 'teaching to the test' approaches. McNess *et al's* (2001) report on the PACE (Primary Assessment, Curriculum and Experience) project, for example, found children's confidence reducing rather than increasing with age. In findings reminiscent of Claxton and Lucas' comments on the competences inculcated by the nineteenth century education system, they noted that children were judging their own and others' work on the basis of criteria such as neatness and quantity rather than understanding. Evidence from the Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI – Centre) studies on the impact of repeated testing on pupils across the world further suggested that:

> *'high stakes testing led to pupils asking not how much they had learnt but how well or badly they had done against the tests. It reduced pupils' learning potential… (It) encourages them to develop test-taking strategies designed to avoid effort and responsibility…teachers adapt their teaching styles to train pupils to pass tests even when the pupils do not have the higher order thinking skills the tests are intended to measure…'*
>
> (Harlen and Deakin-Crick, 2002, quoted on NUT website)

Research by Paul Black and colleagues at Kings College London concluded that SATs were 'useless as a measure of educational progress.' (Black *et al*, 2002), but provided evidence from a range of studies that formative assessment, by contrast, can significantly enhance children's attainment. Involving children actively in assessing their own learning, and the use of ongoing assessment as a means of shaping that learning rather than simply as

a final indicator of achievement, thus came to be adopted in schools as 'Assessment for Learning' – now a key component of learning to learn approaches in schools. By 2004, the Primary National Strategy required schools to ensure that children were involved in assessing their own learning and that assessment for learning was being used across the curriculum, as well as that targets were fully understood by children and parents as well as staff. Growing pressure towards greater responsiveness to the needs of individuals in preference to a 'one size fits all' approach led to the Gilbert Review on personalisation in learning in 2006, to which the Campaign for Learning gave evidence, which recommended a more tailored curriculum, with greater recognition of individual difference and more account taken of skills, preferences and existing knowledge.

The result of these developments has been a greater emphasis on developing skills and competences alongside knowledge within the National Curriculum. Thus the QCDA website now advises:

'At all key stages, pupils learn, practise, combine, develop and refine a wide range of skills in their work across the National Curriculum. Some of these skills are subject specific (painting in art and design), some are common to several subjects (enquiry skills in science, history and geography). Some skills are universal, for example the skills of communication, improving own learning and performance, and creative thinking. These skills are also embedded in the subjects of the National Curriculum and are essential to effective learning.'

(QCDA website)

As a result, a range of competence frameworks grew up alongside the National Curriculum in the schools sector, in many of which learning to learn and related approaches featured strongly.

4.4 Competence frameworks in schools

One successful competence-based curriculum framework is the Royal Society for the Encouragement of Arts, Manufactures and Commerce (RSA)'s 'Opening Minds'

framework, developed specifically to influence delivery of the National Curriculum and shift the focus from content onto competences (RSA, 2006, p3). It aims to develop competent young people who have the ability to understand and to do, rather than just facilitate the transmission of knowledge (see RSA website). Key competences involved in the framework are learning, citizenship, relating to people, managing situations and managing information.

The Opening Minds Impact Update report (2008 pp7–8) found largely positive feedback from schools, parents, Ofsted and local authorities. They report improvements in learning behaviour: 79.5% of schools felt they made good progress in engagement with learners, and a significant percentage reported raised learner self-esteem, greater independent learning, and new methods of teaching. External feedback from Ofsted has been largely positive including a comment regarding attainment:

'Year 7 students learn how to learn and this knowledge is a key factor in their academic success in later years.'

(ibid, p9)

Some of the competences of the Opening Minds curriculum relate closely to learning to learn skills. For example under the category of 'learning', Opening Minds students are expected to demonstrate that, amongst other competences, they have:

• understood how to learn, taking into account their preferred learning styles, and understood the need to, and how to, manage their own learning throughout life

• learned, systematically, to think

• learned to enjoy learning for its own sake and as part of understanding themselves.

The curriculum is currently in use in a wide range of schools across the country, including schools working with post-16 learners in sixth forms, and the RSA's Academy at Tipton in the West Midlands is building its curriculum on this foundation.

Although the RSA does not use the term 'learning to learn', learning to learn approaches are implicit in the Opening Minds curriculum,

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and its reported outcomes reflect the Campaign for Learning's experience of positive feedback from schools, parents, pupils and Ofsted. Outcomes from the Campaign's nine years of action research in schools are documented elsewhere (see, for example, Goodbourn *et al*, in press), but have included positive effects on SATs results, pupil attendance and behaviour, learner motivation and teacher morale. Individual case studies have also shown dramatic effects on coursework submission when learning to learn approaches were combined with parental involvement strategies.

The 'Opening Minds' curriculum embeds the development of competences in curriculum delivery. Learning to learn skills can likewise be integrated, delivered separately, or delivered through a combination of the two. Some commentators (for example Cornford, 2002, and Higgins, 2007) argue strongly that learning to learn approaches should be embedded in the curriculum to be most effective. Higgins reports that as the Campaign for Learning's project progressed, growing numbers of schools chose to embed approaches into their curriculum and teaching practice because they found this worked better than separate scheduled sessions (ibid, p32). Cornford (2002, p365) advocates both adjunct and metacurricular approaches to teaching learning to learn skills in Australia, where teaching learning to learn skills involves cognitive and metacognitive strategies. In the most effective practice, these skills were embedded into the subject content at different points in the learning process, such that learners became conscious of cognitive and metacognitive strategies and how to use these most effectively, and were able to transfer their learning. This addresses one of the barriers to teaching such skills – the fact that students may not be conscious of the process they are involved in:

> *'many students may be unaware of its [metacognition] importance unless the process is explicitly emphasised'*
>
> (Donovan *et al*, 1999, p17)

A slightly different approach has been adopted by the thinktank FutureLab, who, with the support of Microsoft, have developed 'Enquiring Minds', currently delivered in 30 English schools. The approach is based on the belief that children bring skills and knowledge into the classroom that need to be harnessed. The initiative provides students with the opportunity and encouragement to undertake research in their chosen area of interest. Thus children play an active role in shaping their curriculum and learning, although much of the delivery of this curriculum takes place in discrete sessions. It has led to the creation of a free web resource – Exploratree 'thinking guides', also supported by Microsoft, that can be customised to support projects and research. Enquiring Minds' pedagogy is akin to learning to learn because the project places emphasis on pupils becoming independent and active learners who can personalise and take ownership of their learning.

Some elements of learning to learn practice have become embedded in standard school practice in England, even in schools that do not formally take a learning to learn approach – for example, Assessment for Learning, as we have seen above, is now something all schools are expected to adopt. However, if learning to learn, or elements of it, become an orthodoxy that schools, teachers and pupils are required to use, this would run counter to the principles of individual choice and responsibility that drive the approach. In a letter published in the *Times Educational Supplement* in January 2009, for example, Labovitch gives a tongue-in-cheek account of a ritualised staff development session, concluding: 'The session usually ends with the ritual chanting of the mantra: 'knowledge bad, learning-to-learn good'. Countries including Hong Kong, New Zealand, Tasmania and Queensland in Australia, Hungary, Finland, the Netherlands, Norway, Singapore and the state of Wisconsin in the USA (Whitby, Walker and O'Donnell, 2006, p10) have also incorporated 'lifelong learning skills' into their primary and secondary curricula, including elements of learning to learn. In Hong Kong, one of the goals of school curriculum reform was to shift education from transmission of knowledge to development of attitudes and skills for lifelong learning (ibid), just as the RSA hoped to do with its Opening Minds curriculum.

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4.5 Learning to learn in Further Education

The most striking feature of learning to learn research in Further Education is how little of such research has been published – and indeed, how little research exists on learning in Further Education more generally, both at home and abroad. The bulk of the research outlined in the previous chapter has taken place in relation to schools, with some on Higher Education, some on adult learning, including learning taking place in the FE sector, and a little on vocational learning for young people and adults. As mentioned earlier, learning to learn approaches very closely mirror what adult educators in the UK promote as good practice, and research exists to support the effectiveness of these approaches with adults, although it is not extensive. Relatively little of the research mentioned to date was undertaken in an FE context – and this reflects our experience and that of other commentators in seeking research evidence on effective learning to learn practice in FE.

There are several potential reasons why it has been difficult to locate substantial learning to learn research evidence in FE. Firstly, learning to learn as a concept has only relatively recently become recognised in FE, although as we will see, several of its component parts form part of the traditions of best practice in the sector. Secondly, the FE sector has attracted much less research attention in general than either schools or Higher Education, reflecting perhaps its 'Cinderella' status in the education system, defined more by what it is not than what it is, and regarded as a 'catch-all' for social as well as educational issues. The sector's diversity, often regarded as one of its strengths, may be a disadvantage when seeking to build up a body of evidence of best practice across the sector, as the client groups it caters for and curricula it offers span such a wide range. The strong tradition of practitioner research that we see in schools is a relatively recent phenomenon, and a similar tradition has not grown up in FE – perhaps because the market-driven model of colleges since 1992 has focused attention onto areas such as income generation and marketing, and perhaps because FE has tended to focus on vocational updating and management skills as

a means of driving up quality, and engagement in research has not been regarded as central to the mission of the sector. The result is a relative dearth of robust research evidence on which to base practice in the FE sector, and a relative lack of engagement with research amongst FE practitioners.

Nash *et al* (2008, pp18–20) argue that insufficient resources have been allocated to undertaking evidence gathering to inform educational practice in the post-16 sector in England. They point out that there is limited research on content, pedagogy and assessment, in particular in relation to curriculum development and teaching and learning. They ascribe the gap in research to the following factors:

- Teaching and learning has not been prioritised in a sector which has become target driven and encouraged to define achievement in terms of prescriptive lists of assessment criteria. Summative assessments to achieve targets have become the currency, rather than pedagogy and encouragement of broader reflection on what has been learned.

- The sector is subjected to greater central direction and management than other sectors. There have been continuous changes in funding, along with frequent restructuring and stricter auditing. All of this has compromised investment in research and emphasis on the key elements of teaching and learning.

- Current research projects are influenced by a culture which tends to be concerned substantially with continuity of funding and immediate benefits.

- Raising standards does not necessarily include improving teaching and learning.

- There has been greater pressure on FE to be cost effective by providing more solutions at a lower cost per student, at the expense of investing in research.

A wide range of internal and external influences and structural changes has affected the FE sector over the past twenty years, including the introduction of competition via incorporation of colleges, their removal from local authority control and the creation of a quasi-market system, with a resulting loss

of collaborative structures for professional development and involvement in research, and increased government intervention in the form of greater regulation and reform. (See, for example, Thompson, 2009, pp40–41.)

With the huge range of provision mentioned above, the sector has been subject to constant review as to its purpose and effectiveness. Some commentators have stressed the role of FE in addressing the needs of young people and adults disadvantaged in the education system – for example, the influential Kennedy commission into widening participation in post-16 learning argued in the early days of the current Government that 'the national strategy for widening participation must have Further Education at its core' (Kennedy, 1997, p 33). The Foster Review (2005) emphasised the academic-vocational divide described by Anderson *et al* (2001, p2), and proposed delivery of vocational learning as the prime purpose of FE, while a year later the Leitch Review (2006) emphasised responsiveness to employer need.

Thompson (ibid, p41) describes the sector's response to growing unemployment and the decline of traditional British industries in the 1970s. This brought significant numbers of unemployed and vulnerable learners into colleges and necessarily placed greater focus on delivering vocational education. This in turn, he argues, led to limited opportunities for educationalists to develop timely evidence-informed educational principles and shape andragogy/pedagogy. The government expectation that FE will address a wide variety of social issues is illustrated in current and recent externally set priorities for the sector, which include:

- employer engagement and demand-led skills provision (LSC, 2007)

- reducing the number of NEET young people (LSC, 2007)

- achieving greater innovation and meeting the needs of a variety of learners (DIUS, 2008)

- Public Service Agreement Targets including performance indicators in terms of percentage achievement – for example, 85% of 19 year olds to reach level 2 by 2013 (DCSF, 14–19 reform website, 2009).

The sector has also lost research organisations – for example, government emphasis on reform and quality improvement resulted in the split of the former Further Education Development Agency which undertook research in the sector. One part turned into a self-funding research body and the remainder became part of the Quality Improvement Agency, one of two quality improvement bodies since merged to become the Learning and Skills Improvement Service (LSIS). Its remit is practical quality improvement in the sector, which it undertakes by funding support and development projects to share best practice at practitioner level, but with limited links to national research. Meanwhile national initiatives aimed at identifying and sharing best practice in FE – for example, through Centres of Vocational Excellence – have encountered setbacks, not least the fact that incorporation limited what many institutions were willing to share with potential competitors. (See, for example, Easom and Hartley 2006.)

It is tempting to see the lack of evidence-based research in the FE sector in England as the result of government neglect on the one hand and excessive intervention on the other – but this is not only a UK issue. Paul Crisp, Managing Director of the Centre for the Use of Research and Evidence in Education, stresses that limited systematic empirical research in teaching and learning in FE is not a problem only in Britain, but a global issue. Crisp reports a recent American Educational Research Association annual meeting, a gathering of professionals around the world, where 'of more than 900 sessions, only 13 were about student learning in the post-secondary sector' (*Times Educational Supplement*, May 2009).

What, then, do we know about effective practice in learning to learn in post-16 contexts, and what evidence do we have for this?

5. Learning to learn in post-16 learning: effective practice in England and abroad

> *There are some three million learners in the FE sector – a massive and persisting challenge to our education system and the focus of the wider social and political concern for inclusion.*

The European Commission's Equal programme (2004, p2) defines effective practice as: 'when something is working well but only can be achieved under similar circumstances'. This leaves us with an interesting question with regard to learning to learn, as the models we looked at earlier claim transferability to other age groups of learners, learning contexts and subject content. For the purpose of this study, therefore, we will define 'effective practice' by the simple 'rule of thumb' definition of 'what works', and consider in each case where appropriate any potential limitations on the 'similar circumstances' that may or may not produce effective learning to learn.

Before proceeding on this basis we must add a word of warning. The FE sector is a complex one and practice in an FE context therefore has the potential to be effective with one segment of its client group but not with another. FE encompasses 16 year old school leavers, adult returners, workplace learners, management trainees and Higher Education students, to name but a few FE client groups. Learners may be studying full- or part-time, on- or off-site, in companies, by distance learning or via partner agencies, which range from prestigious HE institutions to small community and voluntary organisations. This gives the sector a richness and complexity which militates against 'one size fits all' approaches. This is summed up by Staffordshire University as follows:

> *'The Chief Inspector of Adult Learning in England (2003) stated that the majority of further education (FE) learners are adults who are usually on part-time courses in general further education colleges (GFECs). Adults make up four fifths of student enrolments. Three quarters of such learners are women. They are not the 16–18 year olds who have been the focus of much recent government policy, who are largely studying full-time, on larger courses and are concentrated in sixth-form and tertiary colleges. There are some three million learners in the FE sector – a massive and*

> *persisting challenge to our education system and the focus of the wider social and political concern for inclusion. The FE sector is therefore a hugely diverse and complex entity and is at the heart of the educational debate in the UK and elsewhere.'*

> (Staffordshire University website, 2009)

Although, as we have seen, learning to learn models claim to identify approaches which will enhance learning for any client group and in any context, we must bear this diversity in mind as we proceed.

5.1 Is learning to learn relevant to FE?

Before considering effective practice in FE, we must first consider whether learning to learn transfers from schools and HE into the FE context at all. A potential reason for the lack of research evidence on learning to learn in FE might be that learning to learn approaches may be irrelevant for older learners. It would be reasonable to suppose that learning to learn skills might be best learned by the young, for example, and that over time our existing ways of thinking and operating might become too ingrained to allow us to develop them.

Learning researchers argue, however, that we may in fact learn such skills more effectively as we mature. Although research evidence on learning in the specific context of FE is limited, we do have reliable evidence on how our learning abilities develop with age. Vukman (2005) and Coutinho and Neuman (2008) argue that cognitive development increases with age. Vukman (ibid) asserts that people become more reflective and self-aware and are better able to regulate their cognitive functions as they grow older. And as we saw in the previous chapter, psychologists like Resnick now define intelligence as a 'bundle' of skills and aptitudes which can be developed well into adulthood.

Skills for Life researchers, including David Barton and colleagues at the University of Lancaster, have looked at how we learn after the age of 16 and identified key differences, linked with a range of factors, including our motivation and reasons for engaging in learning, our previous learning experiences, our existing knowledge and skills and the ways we integrate new learning with these (see, for example, Tusting & Barton 2003, p20). Some specific features of learning to learn have been shown to be susceptible to development in mature learners – for example, Carol Dweck's work on well-being has focused on resilience and responsiveness to setbacks, which several models identify as a key learning to learn capability. She has demonstrated that these reflect learned beliefs about our own abilities that can be modified, even amongst mature adults. Anderson *et al's* research with adult learners in Scotland demonstrates clear development in critical thinking skills with practice over time (2001, p6). Evidence of this sort suggests that post-16 learners do have the potential to develop learning to learn skills.

Moreover, these skills have obvious potential to help to address the needs of groups disadvantaged in the compulsory education system, who form a significant part of the client group of FE in both the UK and abroad. Some young people and adults are disinclined to engage in learning as a result of negative experiences of schooling. The FE sector has traditionally been successful in re-engaging these learners, and FE colleges have been key players in successful partnership approaches to addressing the needs of young people not in education, employment or training (NEET). (See, for example, successive FEDA/LSDA/LSN studies, such as Bates *et al*, 2005; Macleod *et al*, 2005.) The sector has also had considerable success in re-engaging adults with negative experiences of learning or who have had limited opportunities in the past, although recent shifts in funding towards meeting employer needs has led many providers to reduce their commitment to adult learner responsive provision. (See, for example, Aldridge and Tuckett, 2009.) Learning to learn can help to motivate learners to succeed, help them understand previous bad experiences in terms other than of personal failure, develop their capacity to learn, and to enjoy and value their learning, so it has much

to offer a sector tasked with meeting the needs of those who have gained the least from their education to date.

5.2 Identifying effective practice in aspects of learning to learn

Despite the dearth of specific learning to learn research in the sector, there is evidence of well established approaches in FE that aim to develop some of the skills, dispositions and attitudes associated with learning to learn. For example, there is substantial focus in FE on developing independent and self-directed learning and study skills, on teamwork and peer interaction, and on learner voice and use of feedback in shaping curriculum content and delivery. Post-16 tutor training also tends to adopt many aspects of learning to learn (see, for example, syllabi for tutor certification, such as the City & Guilds 7407 series). Academic research to evaluate the impact of these in the sector is limited, and there has been little attempt to link them specifically under the banner of learning to learn, but these all indicate areas in which examples of effective practice associated with learning to learn may exist.

5.2.1 Self-directed learning

Learning to learn seeks to develop independent learners – individuals who can take responsibility for their own learning. Self-directed learning (in which learners identify their own needs and resources, implementing plans and evaluating outcomes) is a key characteristic of learning to learn and adult learning models. The model is based on the assumption that older learners can direct their own learning – an assumption that Young and Lucas (1999, p106) argue may not be appropriate for FE learners because not all learners may have the motivation, confidence or skills to undertake independent learning, and may need considerable support. However, some degree of self-directed learning appears implicit in the system, given the much lower proportion of contact time with tutors in comparison with schools: a 'full-time' student in FE may receive 15 – 20 hours per week of direct tuition over an academic year. This provides a strong rationale for developing learning to learn skills within the FE sector so that individuals can take charge of their own learning. The work of researchers such as Tusting and Barton (ibid)

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also provides a strong rationale for undertaking separate research and developing specific teaching and learning practices in FE, where learners have different experiences and reasons for engaging in learning compared to learners in schools – or indeed learners in HE, whose circumstances and motivations may be very different. (Researchers including Knapper and Copley (2000) have indicated the potential benefits from learning to learn approaches in HE too, particularly in relation to developing skills and confidence in self-directed learning.)

A study from Australia (Smith, 2000, pp30–31) in the context of vocational education – a central concern of FE – states that although vocational education and training (VET) authorities among others have embraced flexible and self-directed learning, VET learners have not always had opportunities to develop the metacognition skills required for effective self-directed learning. It appears that a certain level of self-directedness is relied upon to implement flexible VET educational initiatives, but these may be ineffective because essential skills for self-directed learning may not have been developed. Learning to learn approaches have much to offer in helping learners develop these skills.

5.2.2 Key skills development in vocational education

In the early days of National Vocational Qualifications in England, concerns were expressed about the extent to which they developed a sufficiently wide range of skills. Young and Lucas (1999, pp104–105), for example, asserted that pedagogy and assessment of NVQs focused far too heavily on assessing workplace 'competence', which resulted in learners developing lower level skills, rather than complex skills including knowledge acquisition required for higher levels of learning and progression from existing learning. Greater focus on outcomes rather than the process of learning can be problematic, as Griffiths and Guile (1999, p167) argued: they asserted that in this type of vocational learning, learning outcomes can become routinised, leading to learners acquiring narrow competences and content knowledge.

After a period of heavy concentration on the development of technical skills, the UK Government recognised that generic skills underpinned an individual's employability in any vocational area and that transferability of skills between employment contexts was of particular importance. Core skills units (later key skills) in literacy and numeracy were first developed, and integrated the development of Skills for Life into vocational study, ensuring that learners took on board relevant and appropriate Skills for Life learning within vocational studies. Broader core areas, including the ability to communicate, work in a team, organise work and set targets, were also identified as important for employability, and a broader range of units to help develop and recognise these were established under the key skills framework that developed from core skills. Although there is limited evidence-based research on learning to learn in FE, the development and accreditation of key skills in vocational learning relies heavily on learning to learn approaches, although these skills tend not to be brought together explicitly under the banner of learning to learn in Further Education in England.

Broadly similar approaches are taken in other countries such as USA, Australia, New Zealand and Canada, where key skills are known as generic skills, employability skills, essential skills or transferable skills. In the USA learning how to learn is incorporated under the 'higher order thinking skills' as part of their generic skills framework. In Canada competences such as 'learn continuously' are incorporated under 'personal management skills' as part of the employability skills framework (National Centre for Vocational Education Research, 2003, p7). Sanguinetti, Waterhouse and Maunders' (2005, p274) research in Australian adult and community education identifies the importance of teaching strategies to develop generic skills and attributes. Their model, described earlier, places autonomy, self-direction and personal mastery at the centre.

In Scotland, the term 'essential skills' was used initially to describe what in England are referred to as Skills for Life – literacy, numeracy and ICT skills. Since Scotland's 2007 Skills Strategy, however, the essential skills framework has evolved to include personal and learning skills, as part of a strategy to promote lifelong learning, alongside

five core skills, skills for employability and skills for citizenship. These changes have been introduced to help to meet the changing demands of learning and teaching, and of employers who expect well-developed 'soft' or transferable skills (SFEU website, 2009). The strategy states that these criteria should prove useful for colleges and Community Learning and Development sectors as they will be aware of the skills employers expect individuals to have learned at school (Scottish Government, 2007, p8).

In England, the 'Improving Own Learning and Performance' (IOLP) NVQ key skills unit (2004) is particularly relevant for developing learning to learn skills, and to underpin self-directed learning as discussed above. It includes techniques and guidance for learners to direct their own learning – for example, to set goals and develop strategies to improve their performance and learn more effectively. It encourages learners to take responsibility for their own learning, to plan and review their progress. Originally however, while literacy, numeracy and IT skills were compulsory units in all NVQ courses, IOLP and units to develop other learning to learn skills such as Working with Others were non-mandatory; learners and institutions were encouraged but not obliged to include these.

More recently, however, these skills have come more to the fore in both schools and FE with QCA's development of a framework of Personal, Learning and Thinking Skills (PLTS) for all learners aged 11 to 19 that spans both secondary schools and FE. This seeks to develop 'reflective learners', 'self-managers' and 'independent enquirers' – features closely associated with learning to learn. Similarly, in recent apprenticeship developments, PLTS are highlighted. The Government consultation paper on the draft Specification of Apprenticeship Standards for England (SASE) includes recommendations to assess personal and thinking skills as part of the assessment of apprenticeships, and these form part of the criteria to demonstrate competence. An apprenticeship framework must contain each of the six PLTS:

'An Apprenticeship framework must specify how training on each of the six PLTS is to be delivered to the Apprentice. Training on

PLTS may be delivered by instruction and/or by practical experience.'

(SASE consultation paper, 2009, p22)

These frameworks assume that learners have the opportunity and guidance to learn these approaches, and that tutors and trainers have the knowledge and understanding to teach these skills and support learners in developing them. We will return to this issue later.

5.2.3 Learning through collaboration and interaction

Merriam (2004, p209) asserts learning is not just an individual, internal cognitive process, but a socially constructed phenomenon, and the context in which learning takes place is crucial to the nature of learning. Context and interaction with others can shape and accelerate the learning process. Learning is better understood when it is placed in context. Young and Lucas (1999, p109) argue that context is an important facet of learning – the context of social interaction and historical relationships that exist between people can help them learn from each other. This can include learning that takes place in classrooms – Anderson *et al* (2001), for example, demonstrated how adult learners developed their critical thinking skills through classroom interaction. Merriam, however, (2004, p210) points out that this can work well in a vocational context too. Learning in the workplace can provide individuals with opportunities to develop 'communities of practice' – to share ideas, help each other solve problems, develop a common practice, and develop collective meaning by interpreting, acting and reflecting on action together.

The model of teachers as learners themselves, working in a cooperative environment with learners to identify suitable learning to learn strategies, is also advocated by Coffield (2008, p9) who describes the ideal college as a 'community of practice', with students and staff learning from each other to shape the way they learn and teach. (Higgins, 2006, pp5–6) describes a parallel 'community of enquiry' approach in schools. Community of enquiry approaches when combined with supportive leadership have, Higgins demonstrates, contributed to professional learning and effective development of teachers and pupils.

These approaches appear appropriate in the FE context, in which learners are encouraged to contribute to curriculum design and delivery and in which tutors are encouraged to work in facilitative ways to support and develop learners. Some of the research questions devised by FE tutors participating in the first cycle of the Campaign for Learning's current Learning to Learn in FE study include:

• Do learners learn in and out of context?

• In what ways can a study skills programme, which includes explicit opportunities to develop metacognitive knowledge and skills, equip learners to make a successful transition to level 3 learning?

• Does reducing curriculum lesson times help with retention, achievement and success of students?

• Will facilitating reflection about learning help learning support staff to be more effective?

5.2.4 Developing a language for learning

Donovan *et al* (1999, p17) describe metacognition as an internal dialogue with self which can be enhanced further through oral dialogue with peers. Existing research in schools highlights the importance of developing a shared language for effective communication and to develop metacognitive skills (see for example Noushad's work on 'metalanguage', 2008, p7).

Developing learners' vocabulary for learning increases their engagement and confidence (see for example Wall *et al*, 2009, p55). A shared vocabulary, coupled with the opportunity to reflect upon learning – 'development of a language for learning as well as for learning about yourself as a learner' (Wall *et al*, 2009, p29) – has enabled school students of all ages to take ownership by talking about their learning, and identifying suitable tools and methods for their own learning. In schools, Wall *et al* (2009, p29) also highlight that closely tied in with talking about skills and dispositions for learning is talking about behaviour, self-management and concentration – for example, one pupil mentioned that learning to learn included controlling one's temper so one can work better in school.

Developing a shared vocabulary may be particularly important at the FE stage, where learners arrive with very different previous learning vocabulary and experiences. Effective use of language alongside peer interaction are two of the approaches that ARIS (2000, p5) identify as developing metacognitive learning in post-16 learners. They recommend that practical strategies such as diary writing be delivered alongside:

• explicit, active analysis and engagement where learners are encouraged to verbalise their learning strategies and share their thinking strategies

• support for learners with metacognitive language and/or frameworks

• providing learners with feedback about how they approached the task (process) rather than only about the end product of the task.

Wall and Higgins (2006, p48) have developed templates to facilitate reflection and metacognitive talk in school settings, but assert that these are adaptable to a variety of contexts and ages. The templates include thought and speech bubbles and prompt questions within those bubbles representing internal and external dialogue respectively. This was initially developed as a research tool for teachers undertaking action research in classrooms, but now has a dual function as both a research and a teaching tool (see Diagram 4).

In their work on learning styles in post-16 settings, Moseley *et al* (2004, p121) argue that a new vocabulary is required to encourage learners and tutors to explore these. Although this can be a motivating and positive experience especially for less confident learners, difficulties of implementing such an approach include:

• There is not one language of learning style but a variety of competing vocabularies dealing with different aspects of learning.

• Tutors may not have sufficient knowledge of the vast research on learning styles and work with many students, and thus may find it difficult to talk about these (ibid, p121).

This links to issues associated with post-16 tutors' professional development and opportunities to engage with research, which we consider below.
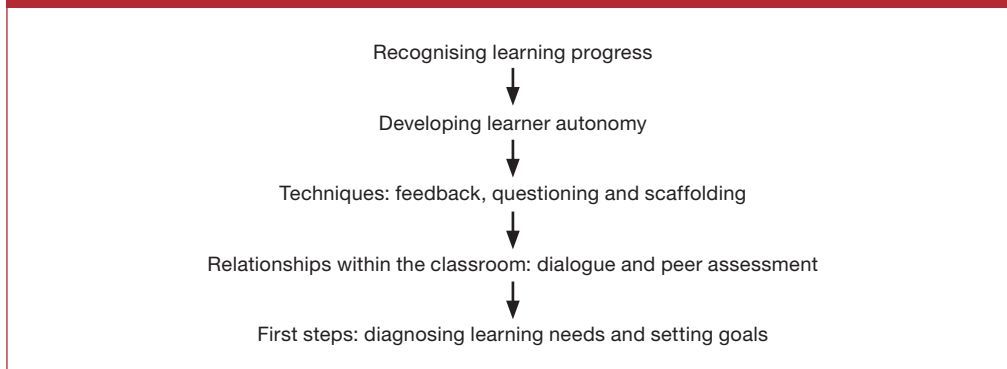
Diagram 4: Examples of response templates
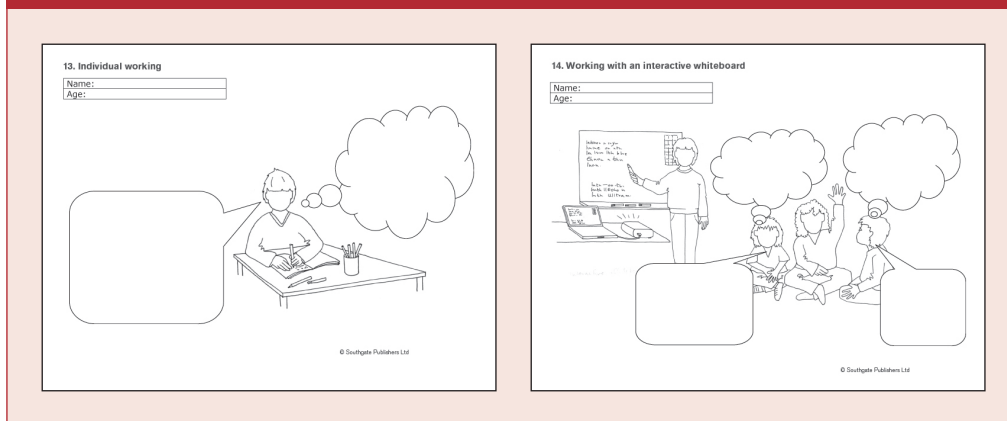
Source: Wall, Higgins and Packard, 2007, pp29 and 30.

5.2.5 Formative assessment

Although final tests and examinations exist in FE, ongoing assessment and feedback in which learners are directly involved are much more common as an assessment methodology. NVQs, for example, are assessed through demonstration of competence and improvement guided by feedback where demonstration is unsuccessful or insufficient. There is an expectation of success, but a recognition that this may take time to achieve. This parallels the Assessment for Learning approach advocated by researchers such as Black and Wiliam in schools described earlier. It is helpful in putting the learner in control of the learning process; it gives learners better understanding of their needs and encourages them to take responsibility for their learning and track their progress.

Learners who have had negative experiences of education, such as Skills for Life learners, have much to gain from formative assessment, which is a feature of Skills for Life good practice in several countries. For example, in Spain (GRET, Autonomous University of Barcelona, 2006) researchers successfully applied formative assessment to encourage autonomous learning among adults with Skills for Life needs, where the learner was responsible for his or her learning. The following step-by-step approach is recommended in the Organisation for Economic Co-operation and Development's (OECD's) report on formative assessment for adults with limited literacy and numeracy skills (see Diagram 5):

Diagram 5: Steps of the learning process

Recognising learning progress

↓

Developing learner autonomy

↓

Techniques: feedback, questioning and scaffolding

↓

Relationships within the classroom: dialogue and peer assessment

↓

First steps: diagnosing learning needs and setting goals

Source: Based on OECD (2008), Teaching, Learning and Assessment for Adults: Improving Foundation Skills, p. 92

The five-stage RARPA (Recognising and Recording Progress and Achievement) process of formative assessment and individual feedback now in widespread use in Adult and Community Learning works on a similar basis (see, for example, local authority websites; NIACE's RARPA site).

5.2.6 Making effective use of learner feedback

Learner voice has gained a much higher profile in all sectors of education in recent years.

Learning to learn helps learners take responsibility for their learning, so that they can identify challenges, articulate their learning needs and work co-operatively with their teachers, tutors and peers to achieve success. Listening to and acting on 'learner voice', therefore, is an important element of learning to learn approaches, as using learner feedback to inform teaching and learning practice can improve effectiveness and also serves to demonstrate the partnership relationship between teacher and learner that learner responsibility implies.

Secondary schools have been encouraged in recent years to undertake extensive consultation with pupils and parents. In the Campaign for Learning's recent MORI survey on attitudes to learning (2008) 65% of secondary students saw learning as their responsibility, not that of their school. They felt their schools were run democratically, with plenty of consultation about improving learning. However, the effective use of such consultation to improve teaching and learning called into question by discrepancies between students' learning preferences and the way they were taught. Both 16-plus and younger learners were quite clear about how they learn best – both adults and young people expressed a strong preference for learning by doing and for learning with peers. However, young people in schools indicated that this was not the way they were taught, with 65% identifying their most frequent classroom activity as copying from a board, and 63% 'listening to the teacher talking for a long time'. Although we cannot expect respondents' learning preferences to match exactly how they are taught, we might expect a greater degree of overlap than this if learner feedback is being effectively used in schools.

As part of the Learning and Skills Council's learner involvement approach, outlined in their 2007 handbook 'Developing a learner involvement strategy', FE providers were encouraged to involve learners in the development and delivery of provision (the Learning and Skills Improvement Service, 2009, pp6–7). Giving young people a voice was used as an approach to personalise learning and improve quality of provision. The first year evaluation of the strategy's impact included benefits such as improving methods of communication between staff and learners, and staff being more confident about how to involve learners. However, the evaluation also asserted that 40% of providers did not involve learners in developing course content, and providers may welcome advice to further improve strategy depth and quality (Learning and Skills Improvement Service, 2009, p7). This highlights areas for further improvement, where learning to learn would be beneficial – for example, learner voice used as part of practitioner enquiry to shape pedagogical and perhaps curriculum development.

The challenges of using learner feedback effectively to improve teaching and learning practice in the current FE context are recognised by commentators including Hartley (2009), who points out: 'at one level we all want … (to take on board learners' views) but, when you throw in the pressures of assessment, limited time to cover syllabus, a proportion of learners who don't attend and others who do attend but would rather not, the reality can be quite different'. Informal feedback from student panellists at a recent conference on teaching and learning in FE (Neil Stewart Associates, April 2009) revealed a similar picture to the MORI survey in schools, with students from differing courses asserting that although they are frequently consulted, they feel their feedback only affects peripheral issues such as catering facilities or car parking, while fundamental teaching and learning approaches remain unchanged. Coffield (2008) has been consulting with learners in the sector on their perceptions of teaching and learning, and has received similar feedback. He expresses grave concerns about the relegation of teaching and learning from central position in our assessments of quality in FE, and in particular stresses

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the importance of full learner involvement in the process of curriculum development and delivery. His paper for the Learning and Skills Network recommends actions to be taken at individual, institutional and government level if teaching and learning are to be given genuine priority rather than lip-service in the sector in future.

5.3 Staff development in FE

Developments in FE that relate to learning to learn have tended to stress the role of the learner in developing his or her own skills, while less emphasis has been placed on the role of the teacher in supporting and facilitating this. Cornford (2002, p366) argues that revision of the curriculum has to be accompanied by development of pedagogy and professional development of teachers, so that teachers will have the knowledge to incorporate learning to learn strategies in their sessions and awareness of overall development of these skills. This would, however, involve some rethinking of both initial and continuing professional development, as the number of teaching hours devoted to subject/vocational content, which has been a major focus in post-16 learning, would inevitably reduce.

As we have seen, research and development in the post-16 sector, particularly around teaching and learning and curriculum content, has not been extensive. Coffield (2008) argues that the FE sector needs more opportunities for continuing professional development (CPD) and teaching and learning research centres to address the under-investment in teaching and learning and CPD. This is starting to happen, with HE institutions now involved in both initial tutor training and continuing professional development in the sector, but this is not always backed by the necessary research evidence on 'what works'.

The appropriate environment must be created for learning to learn practices. Collaboration and sharing information with peers and teachers is part of the process of learning, but this may involve a change in mindset of teaching staff who may need to redefine their role. This implies investing in staff

development, as well as providing tutors with the opportunity to develop their own practices suitable for their target group. Whitby, Walker and O'Donnell (2006, pp22–23), in their study of primary and secondary school curricula in several countries, argue that developing independent learners requires better teaching techniques accompanied by the decline of centralised administration and control of education, to give teachers greater autonomy to devise teaching pedagogy appropriate for their students. Young and Lucas (1999, p102–103) describe a shift from teacher-centred to learner-centred pedagogic knowledge, where teachers have to coach learners to be managers of their own learning. FE teachers' roles have changed in recent years, as they are now expected to develop pedagogical/andragogical practices to meet the diverse needs of their learners.

The Campaign for Learning has championed the learning to learn approach in both initial and ongoing professional development for teachers over the past ten years. As our work has been primarily research-based, it has further worked with teachers to develop models of professional enquiry that develop their research skills and those of their learners, which we see as being central to the effective acquisition of knowledge and to the ability to evaluate what is learned. Wall *et al* (2009) describe teachers as researchers identifying good practice in learning to learn skills.

Professional development of FE teachers is central to implementing learning to learn practices effectively. A recent Ofsted inspection report (2009) of initial teacher training for FE, however, found some areas of poor practice that hindered the delivery of quality training. Findings include weak moderation of practical teaching assessment, under-developed systems for evaluating trainees' progress, and limited opportunities for trainees to receive appropriate the level and amount of training. Trainees employed as FE teachers had heavy workloads and limited or no protected time for study, and there were insufficient opportunities for trainees to teach subjects at different levels and in different contexts (ibid, p12). Furthermore, some of the practices identified were not applied to all areas of post-16 learning – for example,

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the quality of workplace support for trainees in FE colleges differed from that available in adult and community settings. Toni Fazaeli, Chief Executive of the Institute for Learning, commented:

'It is disappointing that trainees employed in work-based and adult and community learning settings continue to be the most disadvantaged in the quality and extent of their workplace support.'

(Talisman, May 2009)

It is to be hoped that the establishment of the Institute for Learning, with a remit to oversee professional development in post-16 education, may help to address some of the longstanding issues around professional development of staff in the FE sector.

6. Tools for learning to learn

Nowadays resource-based learning may take the form of a mix of traditional resources (e.g. interaction with tutor and print media), alongside online and electronic resources.

Learning to learn approaches can be used in any context using a wide variety of materials and tools. Certain learning approaches that are popular and well-used in FE, particularly those linked to recent technological developments, however, may particularly lend themselves to helping FE learners develop certain key competences, skills and knowledge associated with learning to learn. A few examples are outlined below.

6.1 Resource-based learning

6.1.1 Definition and perceived benefits

Resource-based learning (RBL) is learning which gives prominence to the role of resources in the teaching and learning process. In the past, extensive paper-based resources were developed for learners to work through on their own or in groups, but many have been developed or reworked electronically in recent years. Nowadays resource-based learning may take the form of a mix of traditional resources (e.g. interaction with tutor and print media), alongside online and electronic resources. It gives learners access to a range of resources and more choice over what they use, giving them greater control over their learning process. RBL is seen as a flexible and cost-effective way to deliver learning, making it a popular approach in FE. Much current e-learning practice has developed from earlier resource-based learning approaches.

RBL focuses on intelligent design of learning resources to facilitate learning. Thus it places responsibility on the resource developer to design it so that it is accessible, engaging and effective for the learner. Dobrovolny's (2006, p157) study exploring adult knowledge construction in a corporate setting highlights the benefits of using self-paced, technology-based instruction. The study explores how such instruction can help adults personalise information before, during and after the experience, using knowledge construction techniques: conservation, reflection, metacognition, prior experience, authentic experiences, and generative learning strategies. Dobrovolny invites instructional designers to create opportunities to develop metacognitive skills – for example by incorporating questions and practice exercises. Technology-based instruction that enables learners to customise teaching and learning to meet their needs, e.g. skip sections they do not find relevant, or skim instructional information, can help users personalise the learning process and develop relevant skills for learning to learn.

In its traditional forms, RBL required limited peer interaction, which may be seen as conflicting with one of the key approaches of learning to learn – facilitating effective interaction and communication between peers and teachers as part of a learning community or community of practice. Interaction is seen as key to the individual's learning and thinking processes. Technological advances have, however, enabled extensive interaction with tutors and peers through RBL systems in recent years, reflected in the growth of a rich variety of Virtual Learning Environments in colleges and elsewhere.

6.1.2 Challenge: building learners' capability to undertake independent learning

Challenges of implementing this approach are very similar to the ones associated with ICT. There is an assumption that students have the capability to undertake independent learning, and thus can identify suitable materials and customise them for their learning. An earlier study in a schools setting suggests that struggling pupils may not be able to discriminate in the use of resources, summarise information and undertake research. Furthermore, pupils who are very dependent on teacher guidance would find it difficult to make value judgements or informed choices (Mullan, 1995, p388), which are essential for effective use of RBL.

Macdonald, Mason and Heap (1999, p346–7) argue that students require certain skills to become competent resource based learners.

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These include the following skills:

• information handling skills

• operation (of the physical system)

• navigation of electronic environment

• investigation (search/find)

• reflection.

Armatas (2003), working in the HE sector found that students were overwhelmed by the resources and confused about how to prioritise the materials. In fact, Armatas found that students' preferred medium for study was print because it was more portable and could be annotated for their use (ibid, p150). RBL designers working within a learning to learn context might therefore wish to place a heavy priority on involving learners in designing RBL experiences and materials, and on helping students develop the necessary skills to make best use of RBL materials.

6.2 Blended learning

BECTA (2005, p5 and p22) points out that blended learning in FE, using ICT and e-learning with traditional learning resources, became more widespread from 2004. Blended learning draws together different approaches to learning and helps deliver a more tailored approach to develop individuals' learning to learn skills. However, the limitations of e-learning include the assumption that learners have sufficient IT and literacy skills. Curriculum developers and tutors need to take into consideration that some FE learners may have missed out on learning opportunities at school, and IT skills in particular are unlikely to have been part of the school curriculum for mature adult learners.

To address these gaps learners require support, and online learning backed up with face-to-face interaction is frequently recommended. Blended approaches, a mix of resource-based and tutor-based, have been demonstrated to be usually the most effective. Hunt *et al* (2005) argue that: 'the use of e-learning as part of a blended approach to teaching Skills for Life is highly effective for motivating and engaging learners', and although good examples are emerging, many teachers are still not confident about using technology themselves and even

less confident about using it in the classroom. Thus they recommend greater investment in developing good quality ICT training and enhancing practitioner e-learning skills.

In an HE context, Armatas (ibid) investigated how on-campus (mostly younger) students and off-campus students' motives, approaches and attitudes to work influenced their engagement with an online-supported RBL environment which included a learning management system (LMS) combined with other resources such as text, CD-ROMs and web-links. Although there was no significant difference between on- and off-campus students for the percentage of study time spent online, off-campus students generally showed greater confidence in their ability to use computers and less difficulty in finding materials on the LMS (i.e. 64% and 44% of on- and off-campus students respectively found it difficult or very difficult to find material). One reason suggested for this difference was that younger students, who were more heavily represented amongst the on-campus students, were less well equipped for independent learning and more used to relying on tutor support.

6.3 Information & Communication Technology (ICT) for open and distance learning

Open learning provides learners with the opportunity to undertake independent flexible learning, and places them directly in control over what, when, where and how they learn. This can be delivered through various methods including ICT which has grown in popularity and accessibility to all learners in recent years. Smith (2000, p30), in Australia, advocates the development of metacognition skills for the successful delivery of flexible VET in the workplace, suggesting that these are a prerequisite for distance learning. Smith argues that metacognition skills can be developed outside the traditional classroom environment, and knowledge construction can be encouraged through distance learning and the use of technology, as well as:

• learner support

• scaffolding techniques

- human interaction

- guidance.

The challenges of distance learning include the fact that learners may have limited skills, knowledge or attitudes to engage with distance learning – for example, learners may not have well developed Skills for Life (including ICT skills) and motivation or confidence to learn. Tooth (2000, p3) asserts that students who have had only experience of classroom-based instruction are likely to struggle with the absence of teachers, and need to be taught how to work independently, organise their study time and discipline themselves to work with domestic pressure. Concentration on effective design of RBL and e-learning tools using new technological developments, however, may help address these issues – for example, new websites based on *You Tube*-style video presentations (such as the BBC's new RaW site, aimed at adults who are not confident in Skills for Life). E-learning developers aware of the barriers faced by inexpert users can now build tuition on access skills into their learning. The potential of mobile and bluetooth technology to provide accessible, bite-sized learning opportunities anywhere should further extend and enrich RBL and e-learning options for post-16 learners in future.

Pedagogical practices from Canada demonstrate distance education can be used to stimulate thinking skills of vocational students, and appropriate approaches can help to develop learners' capability to undertake distance learning. Tooth (2000, p4) advocates a tailored approach to support vocational students in the workplace including:

- workplace trainers to provide counselling and guidance

- more experienced employees to act as mentors

- choosing multimedia resources appropriate to the student's skills, where they are and learning style e.g. if learner has low literacy levels, audio or video resources would be most useful.

ARIS (2000, p5), from a vocational education context in Australia, asserts that the development of 'good learning behaviour'

needs to be supplemented with the following practices and resources:

- memory techniques so learners can recall materials they study

- mind mapping to link ideas and develop diagrams to assist memory

- reading strategies including different types of reading for different purposes

- resources for research so learners can access knowledge themselves.

6.4 Learning logs

De la Harpe and Radloff (2000, p175–6), working in the adult learning sector in Australia, assert that writing activities can enable learners to be more aware of their cognitive and metacognitive processes and attitudes to learning. Their findings show that learning logs, a self-reporting tool, and writing statements – for example, how learners went about learning – can be useful for reflection and regulation of learning, and thus inform learning and teaching methods of learner and practitioner, respectively. These techniques are used extensively in key skills development in the UK, and are also a regular component of FE teacher training (see, for example, specifications for the CGLI 76407 awards series). Similarly ARIS (2000, p5) identified diary writing as an activity that helped develop metacognitive skills in adults. The researchers demonstrated that such activities also helped learners practise linguistic and communication skills and develop a shared language for talking about learning with tutors and peers – an important factor in effective learning to learn, as highlighted earlier.

Lancaster University Virtual Learning Environment (LUVLE) includes electronic learning logs alongside group discussion to enable students to develop a collaborative and reflective approach to learning – an approach Yip (2009) argues can be extended into the FE context. Yip (ibid, p2) asserts that as there is not a standard design for learning logs, electronic logs should be adapted to meet course, tutor and learner objectives. The LUVLE learning log, for example, was suitable for Lancaster's learners because it was developed on a sound andragogic model and included the input of learners and tutors.

7. Policy issues and implications

"Some commentators argue that our focus should be on improving the quality and relevance of provision to encourage young people to want to participate and that making it compulsory for young people to continue in learning until 18 is a 'red herring' for the Government."

7.1 Current challenges

The challenges facing the FE sector globally at present centre on the economic downturn. Demand for retraining, reskilling and updating for unemployed adults is likely to increase substantially, as is work with school leavers who were not academically successful in school and cannot find work. Flexibility and transferable skills are key to helping young people and adults adapt as well as possible to uncertain economic times, and learning to learn approaches have the potential to contribute here. In addition, the FE sector in England faces uncertainty, with its main funding body greatly overspent and due for closure next year, a potential change of government, a range of 14–19 structural and qualification reforms in process and uncertainty over whether a new government will continue with the proposed raising of the participation age.

The Government's plans to raise the participation age has stimulated much public debate about young people's participation in post-16 learning. Some commentators argue that our focus should be on improving the quality and relevance of provision to encourage young people to want to participate and that making it compulsory for young people to continue in learning until 18 is a 'red herring' for the Government. Barry Sheerman MP, Chair of the DCSF Select Committee, declared in an open meeting in the House of Commons during the passage of the Education and Skills Bill that passing of the legislation would 'give us five years to get the system right' so that young people actively wish to continue in learning. The motivational benefits of learning to learn approaches, well documented in the schools sector (see, for example, Higgins 2007) have potential to help in this regard.

Recent investment in improved facilities in FE in England, in parallel with the Building Schools for the Future initiative in the pre-16 sector, has led to welcome improvements in the FE estate. However, this brings with it a danger of reduced emphasis on what happens inside the new facilities. In particular, investment in research and overarching staff development have been

lacking in the sector – but recently we have seen renewed emphasis on what happens in the classroom. The quality of teaching and learning is central to learners' experience and a crucial determinant of their success. This has been coupled with:

- greater emphasis on learner voice and use of student feedback in the sector

- development of flexible delivery methods, including e-learning, which have the potential to engage and retain a wider range of learners if used innovatively and appropriately

- investment in initiatives to improve initial engagement and access to learning opportunities (including new developments in information, advice and guidance)

- strong emphasis in Ofsted inspection on the learner experience and on the effectiveness of teaching and learning

- a new focus on professional development in the post-16 sector.

This provides an encouraging basis from which to develop a focus on learning to learn approaches and rigorous evaluation of their effectiveness in FE.

This has implications for policy, however. In a recent article in the *Times Educational Supplement*, Andrew Thomson, former head of the Quality Improvement Agency for Further Education, described the FE sector as the most successful part of the education system in England (Thomson 2009, p33). Its ability to engage with young people with a wide variety of needs, including those with negative experiences of schooling and with adults throughout their lifetime, makes it key to the encouragement of lifelong learning. The success of learning to learn practices in schools and Higher Education suggest that learning to learn approaches can be extremely effective in developing competent and confident lifelong learners – yet although much effective practice exists in FE, there is little hard large-scale evidence of what works and few overarching pedagogical/andragogical approaches in which learning to learn can be embedded. The

expectation that FE can provide the educational response to every external issue from community cohesion to economic downturn must be reviewed, and while celebrating the successes of the FE sector in this regard, consideration must be given to how all parts of the education system can play their part in this without burdening one sector to excess.

7.2 Links with other education sectors in England

The FE sector has always worked closely with both schools and Higher Education in England. Recent policy developments, including the introduction of Diplomas, have fostered much closer collaboration between FE sector providers and schools, which should help with exchange of good practice. The developing tradition of practitioner research in schools is one from which FE colleagues could benefit. We have noted the importance of developing a common language in learning to learn classrooms, and work remains to be done to develop common language between FE and schools in order for both to gain maximum benefit from partnership work.

Greater collaboration between FE and HE is well established – for example, through Aimhigher partnerships and other collaborative arrangements designed to widen participation in HE (for a case study on the benefits and issues to be addressed in such partnerships see, for example, Doyle, 2001). There is greater scope for further collaboration on research, on initial and continuing professional development for staff, and on developing joint strategies to address social issues, would also be beneficial to both and to the communities they serve. Government must recognise the FE sector's need for an evidence base for its practice and review how best to invest in research in post-16 learning. It must accord the sector the same respect it gives to HE in terms of trusting professionals and investing in their development, including encouraging them to engage in rigorous research and share effective practice in the same way their HE counterparts do.

FE and HE also have the potential to work together on developing ways of responding to

learners as co-designers in their own learning process – for example, Knapper and Cropley in their (2000) work on teaching methods in HE highlight the need for both colleges and universities to 'respond to the increasing need for people to take responsibility for their own education and to remain motivated throughout their lives' using methods and techniques that embody learning to learn approaches. As the economic downturn triggers record numbers of applications for places in both sectors, it is important that we do not lose our focus on learners as customers, who have choices and meet institutions on an equal footing with bargaining power behind them. FE Inspection has the potential to help here, with a continued focus on the quality of the learner experience and what happens in the classroom. It is important, however, that Ofsted is explicit about what it considers to be good practice (backed up by the sort of relevant and timely research mentioned above), and that 'light touch' approaches continue so the focus remains on the classroom rather than on generation of paperwork and policies. With this focus, the move towards self-assessment models can be extremely helpful in encouraging reflective practice and a genuine, embedded culture of continuous improvement in the sector.

7.3 Broader policy issues for Further Education

At the European level, key objectives of the Lisbon strategy's education and training section include 'making lifelong learning and mobility a reality', where ability to learn is an important aspect. Hoskins and Fredriksson identify learning to learn as one of the eight key competences they recommend for lifelong learning and describe it as 'a quintessential tool for lifelong learning' (2008, pp5, 13, 15). Learning to learn is also considered to be a transversal competence for well-being and updating job-related skills; essential for an individual to be employable and socially included.

Social inclusion, social mobility, community cohesion and engagement with the citizenship agenda are issues that concern not only the UK Government but resonate across the globe. In the UK, the failure of twelve

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years of New Labour administration to make substantial inroads on social and economic inequalities is a constant in the press, with initiatives such as the Milburn Commission on access to the professions developing strategies to address social mobility issues linked with education. The FE sector in the UK has a more diverse client group than any other education sector, and serves to bring learners from different social groups together in ways that can promote engagement and citizenship. Adult education in the sector in particular has demonstrated its power in this regard, but recent refocusing of adult education budgets onto employment-related learning has resulted in substantial reductions in non-work-related adult education provision, and recent research demonstrates that this has had a negative effect on engagement by the least economically advantaged learners (see, for example, Aldridge & Tuckett, 2009).

Links between crime and education are also well documented: Home Office crime statistics in England clearly indicate lower crime rates in areas with higher levels of education, which are also areas of higher per capita income and contain a higher proportion of families belonging to the highest socio-economic status (Home Office, 2003). Teasing out the links between these factors is more difficult, however. Involvement in learning is one of the actions proposed in government and local authority plans aimed at reducing reoffending, along with fostering of family links and support to access employment. In a Further Education context, an interesting study on the effects of the introduction of Education Maintenance Allowances in FE at the same time as the Home Office Reducing Burglary Initiative shows clear correlations between the introduction of these initiatives and reduced conviction rates for burglary, theft and violent crime amongst 16–18 year old males (Feinstein and Sabates, 2005). This indicates the positive potential effects of 'joined-up' initiatives in which engagement in learning is linked with other social change.

Health and well-being are issues of concern to governments across the globe, not least in the West because we face an ageing population, with a corresponding predicted increase in healthcare costs accompanied by

a proportionally lower working age population to contribute towards these. The benefits of learning to well-being, to the promotion of good health and to staving off the effects of ageing are well documented (see, for example, Layard, 2006) and provide a powerful argument for governments to encourage learning at all ages.

The Centre for the Wider Benefits of Learning at the London Institute of Education has undertaken many years of research in this field, and concludes: 'health… is strongly linked to education in the lives of individuals and in policy delivery… wider notions of health such as happiness, efficacy, confidence… are all areas in which education has substantial benefits. Some of these, such as the effect of education in reducing the risk of depression, can be evaluated in terms of reduced NHS expenditures and other social and personal costs. Others have less immediately pecuniary implications but nonetheless contribute greatly to well-being and therefore can be assessed in terms of the methods of evaluation required in the Treasury Green Book (**http://www. hm-treasury.gov.uk/economic_data_ and_tools/data_index.cfm**) for non-monetary benefits. The preventative benefits of education have emerged strongly from our previous research and are an explicit theme of the 2004 Wanless review, *Securing good health for the whole population* (**http://www. hm-treasury.gov.uk/consultations_and_ legislation/wanless/consult_wanless04_ final.cfm…**). Learning at all stages of the lifecourse can bring health benefits but much more research is needed on why this is the case and what the implications are for pedagogy… management and funding.' (WBL website, 2009)

Of particular interest to learning to learn practitioners is the strong relationship indicated by research between well-being and emotional resilience – see, for example, Dweck's research mentioned earlier (2001) and Seligman, 2006 – which indicates the potential of learning to learn approaches in particular to improve the well-being of young people and adults through building resilience. Cathie Hammond's work for the WBL Centre, using data from the National Child Development Study, demonstrates that positive experiences

of learning as an adult are strongly linked with perceptions of self-efficacy, and have a particular impact on adults with low socio-economic status and at risk of exclusion (WBL, ibid) This makes findings like Aldridge and Tuckett's particularly concerning, and recent policy developments to raise the profile of informal adult learning (through the 2008 Learning Revolution White Paper, for example) must be welcomed in this regard.

The ageing workforce is an issue in Britain and elsewhere in the West. Recent political discussions have included increasing state pension age for both sexes to 66 in 2024, to 67 in 2034 and to 68 in 2044 (BBC website, August 2009). As the state pension age is expected to rise, people will be expected to remain in employment for more years and will have to adapt to economic and industrial changes, and build on knowledge and skills throughout their lives.

In Europe there is now greater recognition of the value of promoting an age-diverse workforce and effective 'learning to learn skills at any age' (Cedefop, 2008, p35). 'By 2050 the EU 25 working age population is expected to decrease by 52 million while the population aged 65+ is expected to double (compared to 1995)' (Cedefop, 2009, p202). Countries outside Europe, such as Japan, have implemented lifelong learning practices to support older workers' re-entry into employment through the delivery of vocational training programmes to update and develop new skills including learning to learn skills, self-employment and presentation skills (Cedefop, 2008, p99–100). The economic downturn has demonstrated once again the importance of developing resilient and confident learners who can embrace and adapt to changes in the economy, highlighting the prophetic nature of John Holt's advice 45 years ago, quoted earlier:

'Since we cannot know what knowledge will be most needed in the future, it is senseless to try to teach it in advance. Instead, we should try to turn out people who love learning so much and learn so well that they will be able to learn whatever needs to be learned.'

(1964, p 37)

8. Conclusions and recommendations

> *This report did, however, find effective practices that sought to develop skills that could improve individuals' capacity to learn.*

FE caters for a wide variety of learners of differing ages and backgrounds, studying a great range of subjects in many different modes and contexts. There is a strong argument that learning to learn approaches will prove effective for FE learners, both young people and adults – indeed, many recent post-16 curriculum developments implicitly rely on these. Equipping FE learners with learning to learn skills has the potential to make them more effective lifelong learners, more employable and more engaged citizens, with transferable skills that they can adapt to their circumstances. The Government clearly has an interest in this but needs to acknowledge the diversity of experience and aspirations of FE learners and staff.

Learning to learn can be particularly relevant for FE learners as they direct their own learning more than learners in schools. Many may have had negative experiences of previous learning that learning to learn can help counteract, and all require motivation and resilience to learn even under pressure. A high proportion of FE learners are adults, and learning to learn links closely with approaches that have been demonstrated as effective in adult education. Despite the clear rationale for implementing learning to learn in FE, however, this study found limited evidence-based research that specifically explores learning to learn practices in FE in England and abroad.

We identified five learning to learn models from Australia, UK and Belgium, only three of which were explicitly identified as learning to learn models. The models all describe capabilities, tools, strategies and processes required for learning to learn. One model described a cycle of learning to learn activity, and one a cycle of professional-led enquiry. One model emphasises the reciprocal relationship between teacher and learners across a range of classroom activities. It is difficult to isolate any one model that fits the wide range of contexts applicable in FE, but all have the potential to help build our understanding of how learning to learn might work in the FE sector.

This report did, however, find effective practices that sought to develop skills that could improve individuals' capacity to learn. These were not delivered explicitly under the banner of 'learning to learn' but addressed several key components of learning to learn approaches. These included pedagogical/andragogical practices that sought to:

- develop a variety of thinking skills, in particular critical skills
- develop ICT skills, which underpin effective use of e-learning and RBL
- develop language for learning and communication skills to improve peer interaction and interaction between teacher and learner
- encourage learner feedback and use it to shape teaching and learning.

Tools and approaches that were used to encourage learners to be independent and flexible included:

- blended learning
- e-learning
- learning logs.

There are currently significant gaps in engagement with research and continuing professional development of staff in relation to 'what works' in teaching and learning. Both are essential to develop appropriate pedagogy/andragogy and curricula for learning to learn. However, strong emphasis has been placed recently in the sector on developing effective teaching and learning practice and learner voice – two key features of learning to learn. This is encouraging, and could form a foundation for future research to underpin coherent learning to learn development across the FE sector.

Recommendations:

- Government must recognise the importance of effective teaching and learning across all phases of learning in helping individuals of all ages achieve their potential.

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- This implies recognition of the importance of developing effective pedagogical/ andragogical approaches in the FE sector – not as part of a deficit model to address perceived shortcomings, but to allow a successful and responsive sector to become even more effective in future.

- In the light of the new tasks being assigned to the sector, greater investment in staff development is needed to share good practice and ensure that all staff have the skills to deliver and support learning effectively with the wide variety of learners with whom the sector engages. At a time when requirements for specified numbers of hours of CPD per year are being introduced, concepts of entitlement could usefully be explored here, and benefits of CPD promoted peer to peer across the sector.

- Investment in evidence-based research is also needed, including practitioner research and the development of an expectation that FE staff will engage in research and reflective practice, as now happens in schools.

- Educationalists must be amongst the stakeholders routinely consulted, to identify the research and professional development needs of the FE sector.

- The benefits that learning to learn approaches have brought in schools should be promoted to policymakers and FE practitioners, and strategies identified to highlight the links between these and existing successful practices in FE that form part of learning to learn approaches in other sectors. Cooperation, collaboration and coherence should be encouraged across all phases of learning for the benefit of both learners and teachers.

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Appendix 1: Methodological note

2.1 Aim of the research

This research provides an up-to-date review of literature exploring the impact of learning to learn approaches in the post-16 sector, primarily in England but with reference to relevant international studies, between 1999 and the present day. The study aimed to:

- identify effective practice in learning to learn in FE in England and abroad

- identify policy implications for England

- offer recommendations on the development and promotion of learning to learn approaches in the sector.

2.2 Methods

2.2.1 Stage one

Literature searches were undertaken during February 2009 to retrieve published studies including books and journals, conference reports and committee papers, press releases and periodicals. Materials that were identified were published within the last 10 years and in English to ensure most current and accessible materials were retrieved. Searches were undertaken using:

- the internet (Google and Google scholar)

- library catalogue of Institute of Education University of London

- educational databases including: British Education Index (BEI), Current Education and Children's Services Research in the UK (CERUK), Educational Evidence Portal (eep), Teacher Training Resource Bank (TTRB) and Education Resources Information Centre (ERIC).

Suggestions of relevant materials to review were taken into consideration from practitioners and researchers who are involved in the Campaign for Learning's Learning to Learn schools project. Materials were identified by scanning bibliographies of relevant studies. Keywords used to undertake searches on databases, in library catalogues and on the internet, and to scan published materials include:

- learning to learn
- metacognition
- key skills
- learning styles
- learning skills
- lifelong learning.

These keywords were also used in conjunction with: Further Education, post 16, adult education, vocational education and training (VET), community colleges, college, and names of countries e.g. Denmark, Hong Kong, Canada and New Zealand. This process led to the retrieval of 111 materials.

2.2.2 Stage two

The literature list was narrowed down to 84 materials during March 2009 and follow-up work undertaken in July and August 2009. This process involved identifying the most relevant literature to review i.e. studies that specifically explored learning to learn theory, practices and policies in post-16 education. Stage one retrieved limited number of materials that specifically explored learning to learn theory and practices in the post-16 sector. Thus in order to cover the research gaps in FE and provide a better understanding of learning to learn theory and practice, some of the materials retrieved from HE and schools sectors were included in the reduced list of materials.

These materials were reviewed and analysed to explore:

- conceptual issues: definitions and characteristics of learning to learn

- historical and contemporary context

- learning to learn models

- effective practice in England and abroad

- policy implications for England.

Feedback was gathered throughout the research from relevant stakeholders, including members of the Campaign for Learning's National Learning to Learn Project Advisory Board (see Appendix 3) and Further Education practitioners, to inform and shape the research.

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Appendix 2: The Campaign for Learning's 5 Rs for Lifelong Learning

	Attitudes/Attributes	Skills Demonstrates ability to:	Knowledge Knows how:
Readiness	• Motivation • Curiosity • Self-belief/esteem • Self-efficacy (*optimism re the learning outcome, confidence and willingness to take risks*)	• Assess and manage own motivation towards a task • Set specific goals which connect to particular learning • Achieve a positive learning state • Manage own learning process • Talk about learning to learn in relation to a new task	• To assess own motivation • To set goals and connect to the learning • To use a L2L language • To assess own preferred learning environment • To apply learning, including in different contexts
Resourcefulness	• Learning from and with others • Learning creatively in different ways • Flexibility • Applying learning	• Make most of own preferred learning approaches and environment, and those of others • Develop and expand learning repertoire and to harness creativity • Find and use information • Communicate effectively in different ways • Apply learning/use what has been learned, including in different contexts	• The mind works and how humans learn • To assess own preferred learning approaches and environment, and is aware that others may prefer different approaches • To use different approaches to learning • To seek out and use information, including through ICT • To communicate effectively in different ways
Resilience	• Keeping going • Learning under stress • Managing feelings about learning and teachers, peers and resources	• Persist and apply learned optimism and self-belief/self-efficacy approaches • Empathise and use Emotional Intelligence • Use different approaches when stuck • Use different memory approaches	• To use learned optimism and self-efficacy approaches • To empathise and use EQ approaches • To proceed when stuck • To use different memory approaches
Responsibility	• Maximising own self-awareness • Empathy towards other learners • Understanding of how self and others learn • Making best use of opportunities for collaborative learning	• Understand and articulate own areas of strength and weakness • Think about others as learners and ask for and offer help with learning • Take ownership of own learning • Learn alongside others	• To be a good learning role model • To plan and set targets for own learning • To work with others to learn effectively • To consider other people's learning
Reflectiveness	• Looking back • Improving learning and performance • Practising	• Stop and reflect (*e.g. ask questions, observe, see patterns*) • Experiment with learning • Evaluate learning • Use different memory approaches • Make connections	• To stop and reflect (*e.g. ask questions, observe, see patterns*) • To experiment with learning • To use different ways to evaluate learning • To make connections

Source: Campaign for Learning website, 2009

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Appendix 3: Campaign for Learning National Learning to Learn Project Advisory Board

Prof Viv Baumfield	University of Glasgow
Ms Jackie Beere MBE	Campaign for Learning
Mr Balj Bhinder	Learning and Skills Network
Mr Mark Chater	Qualifications and Curriculum Authority
Prof Guy Claxton	University of Bristol
Mr Philip Crisp	CUREE
Dr Kathryn Ecclestone	Oxford Brookes University
Ms Kat Edmonds	Cheshire County Council
Ms Nansi Ellis	Association of Teachers and Lecturers
Ms Barbara Firth	London Borough of Enfield
Ms Rebecca Goodbourn	Campaign for Learning
Mr Toby Greany	National College for School Leadership
Dr Elaine Hall	University of Newcastle
Ms Annie Hall	Learning & Skills Council
Ms Tricia Hartley	Campaign for Learning
Mr John Hattersley	Cheshire County Council
Prof Steve Higgins	University of Durham
Ms Vivien Lloyd	Cheshire County Council
Mr Ian McGimpsey	RSA
Ms Lynne McKinstry	London Borough of Enfield
Ms Karla McLaren	Campaign for Learning
Ms Colleen McLaughlin	University of Cambridge
Mr Ian Patience	Northumberland CC Education Development Centre
Dr Dave Pedder	University of Cambridge
Mr Colin Rose	Accelerated Learning Systems Ltd
Mr Dan Taubman	UCU
Ms Theresa Thornton	Northumberland College
Dr Lucy Tiplady	University of Newcastle
Dr Carl Towler	University of Newcastle
Dr Kate Wall	University of Newcastle
Mr Christopher Waterman	Association of Directors of Children's Services
Dr Chris Watkins	University of London Institute of Education
Ms Victoria White	Department for Innovation, Universities and Skills
Ms Rebecca Williams	Camborne, Pool & Redruth Success Zone
Ms Meena Wood	Ofsted

We are grateful to the members of the Advisory Board for their comments on this research.

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