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ABSTRACT

England's Learning and Skills Research Centre (LSRC) is working to build a strong body of evidence from rigorous research that is focused on critical and innovative thinking and models and solutions for the long-term development of post-16 learning. In 2002-2005, the LSRC will focus on the following activities and goals: identify key priorities; commission major studies; enhance the impact of research on policy and practice; help increase the overall research effort; build on existing knowledge from research and practice; contribute to the development of capacity in post-16 research; develop a wider range of research methods; and engage in "blue skies" studies. The titles of LSRC's major research programs for 2002-2005 are as follows: (1) Participation in Post-compulsory Learning; (2) Vocational Learning, Skills, and Work; (3) Developing Learning and Teaching; (4) The Organisation of Learning; and (5) Developing the Workforce for Post-compulsory Learning. In all these research programs, the LSRC will implement its Building Effective Research strategy, which it is currently visualizing in the following interconnected strands: (1) strategies for optimizing research impact; (2) building capacity; and (3) developing research methods. In its research activities, the LSRC will work with a wide range of local, national, and international partners and stakeholders from education, government, and business/industry. (MN)

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Research Strategy 2002-5

Influencing the future:
informing policy and improving practice through research

learning
& skills
research
centre

The Learning and Skills Research Centre aims to be an authoritative source of knowledge and ideas, informing and influencing the future development of a successful and sustainable system of post-16 learning. The LSRC will create a strong body of evidence from rigorous research, focused on creative, critical and innovative thinking, and models for the long-term development of post-16 learning. The Centre will work to ensure that research has a strong and positive impact on the development of policy and practice.

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Research Strategy 2002-5

Influencing the future:
informing policy and improving practice through research


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Foreword

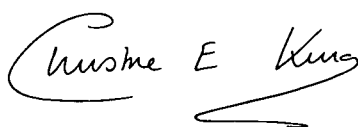
The creation of the Learning and Skills Research Centre (LSRC) is a great opportunity to help develop the future of post-16 learning through an ambitious research strategy. The LSRC is charged with tackling the big long-term issues through rigorous research. We are asked to think freely and boldly about the future – 10 and 20 years from now – and to ensure that learners of the future are at the heart of our thinking. Our role is to help create, in cooperation with others, a stronger evidence base that is of real use in developing sustainable policies that will allow us to break out of some of the deep-seated problems in our education system.

The Advisory Forum for the Centre is a group of the highest calibre. The commitment of its members is proof of the importance of post-16 learning to the creation of a learning society and to the economic and social wellbeing of Britain. Their collective knowledge will help us realise the ambitions we have for the Centre's success.

If we want lasting improvements in learning we need a vibrant research culture that will allow us to make greater use of better evidence to support decisions for change. The Centre will work to foster such a culture, by cultivating partnerships with the research community, offering support to researchers and acting as brokers to create a more coherent knowledge base.

Rigorous research is essential to our success. But future-gazing is not a luxury – it is important to learn to think long term, to free up ideas, to take risks, and to imagine the future.

I want to thank the Department for Education and Skills (DfES) and the Learning and Skills Council (LSC) for their foresight in funding the LSRC. With the Forum, the Director and her team at the Learning and Skills Development Agency (LSDA), we will work hard to make a success of our strategy.



Prof Christine King
Chair, LSRC Advisory Forum

The LSRC research strategy follows extensive consultation, debate and consideration of existing knowledge and research activity in post-16 learning. This document sets out our vision and aims for the first three years of the Centre's work, and introduces the programmes of work in which key themes and issues are located. It also explains our approach to commissioning work. We hope the programmes and the issues and questions we have identified will inspire research that is exciting, innovative and robust, and will lead to positive change for the future.

This is an ambitious strategy. Its success depends on cooperation and partnership with the research community and on achieving strong working relationships with policymakers and practitioners. We invite feedback on the strategy, which will be reviewed regularly. We welcome new ideas, creative thinking and new information at any time to help us to develop and promote a strong and productive research culture across post-16 learning – and we look forward to working with you on this challenging agenda.



Ursula Howard
LSRC Director

The Advisory Forum

The Advisory Forum promotes evidence-informed policy development for the future. The Forum guides the work of the LSRC and works to optimise the impact of its research efforts.

The work of the Forum will ensure that the LSRC benefits from the knowledge, experience and commitment of senior colleagues from the fields of research, policy and practice in post-16 learning.

The members of the Advisory Forum are:

Chair

Prof Christine King
Vice-chancellor
Staffordshire University

Vice Chair

Prof Peter Scott
Vice-chancellor
Kingston University

Members

Prof Tim O'Shea
Principal Designate
University of Edinburgh

Prof Kevin Morgan
Professor of European
Regional Development
Cardiff University

Carolyn Hayman
Chief Executive
The Foyer Federation

Paul Convery
Chief Executive
Centre for Economic and
Social Inclusion

Dr Geoffrey Copland
Vice-chancellor
University of Westminster

Ruth Silver CBE
Principal
Lewisham College

Prof Charles Desforges
Professor
School of Education
University of Exeter

Prof Trevor Sheldon
Head of Department of Health Studies
University of York

Ann Limb
Chief Executive
University for Industry

Prof David Sherlock
Chief Inspector
Adult Learning Inspectorate

Sukvinder Stubbs
Chief Executive
Cadbury Trust

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Member of the National Educational
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The Work Foundation

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Learning and Skills Development Agency

Secretariat

Dr Ursula Howard
Director of Research
Learning and Skills Development Agency

Research centre for post-16 learning

Influencing the future:
informing policy and improving practice through research

The Learning and Skills Research Centre is a new independent centre for research that will inform future policy development and practice in post-16 learning.

Vision

To be a powerful and authoritative source of knowledge and ideas, informing and influencing the future development of a successful and sustainable system of post-16 learning.

Mission

To create a strong body of evidence from rigorous research, focused on creative, critical and innovative thinking, models and solutions for the long-term development of post-16 learning, and to ensure that the Centre's research has a strong and positive impact on the development of policy and practice.

Aims

Focusing on the next two to three decades, the Centre will identify key priorities, commission major studies and ensure that research findings are meaningful to users, allowing them to take action for change.

The Centre will:

Commission major studies

We will commission research that tackles fundamental problems and long-term trends affecting the organisation and delivery of post-16 learning. The Centre's research programmes will either be commissioned externally through open tender, or, where appropriate, through partnership arrangements where there is specific expertise.

Enhance the impact of research on policy and practice

The Centre will work to:

- provide a stronger evidence base
- develop a stronger theoretical and conceptual basis for the development of post-16 learning
- communicate the outcomes of research more effectively
- develop innovative ways to ensure that research findings can be transformed into useful tools for policy and practice.

Help to increase the overall research effort

We will increase national research in post-compulsory education by:

- supporting the research community
- promoting partnership working
- brokerage
- seeking new sponsorship and funding for post-16 research.

Build on existing knowledge from research and practice

By reviewing research, synthesising findings and facilitating better communication of research-based information and ideas, we will be able to identify where new research is needed. This will reduce duplication, add value by making existing evidence better known and provide an opportunity to develop new knowledge.

Contribute to the development of capacity in post-16 research

The Centre will support the research community by offering information and support and development services that help to develop research capacity and skills.

Develop a wider range of research methods

The Centre will encourage a range of research methods, increasing the body of quantitative research, longitudinal studies and international comparative research. We will encourage interdisciplinary approaches to research questions. We will seek to develop innovative methods to complement existing research approaches. We will work with experts in the fields of trend analysis, forecasting and scenario-building.

Engage in 'blue skies' studies

We will promote forward-thinking, trend analysis and other activity that helps us to explore the future intelligently, and to predict the need for adaptation or radical reform to meet a changing world.

Distinctive features

A focus on post-compulsory learning

The Centre has an exclusive focus on learning that is post-compulsory: whether formal or informal, in schools or colleges, in the community or the workplace.

A focus on impact

The Centre has a specific remit to increase the impact of research. Into all of the Centre's programmes we will build ways in which research can effectively inform policy development and change practice.

Breadth and connectivity

The Centre will engage with and connect priority issues, themes and research questions across post-compulsory learning, encompassing pedagogy, participation, vocational learning, skills and workforce development, curriculum issues, and the organisation of learning.

Close links with research, policy and practice

While the Centre's research will be conducted externally, the role of the LSDA as managing agent will enable research to be effectively communicated to policymakers, practitioners and the wider research community.

Principles and values

Independence and rigour

The Centre will ensure that its work is rigorous, independent and of a high quality. To achieve this we will use academic review procedures and analyses of need and merit. As well as being guided by the Advisory Forum, the Centre will seek to draw in further external expertise to help guide us in the work, design and specification of our research programmes. When commissioning research we will take account of external expert advice on quality and methods.

Openness and accountability

The operation of the Centre will be as transparent as possible, based on equality of opportunity and fair procedures. Information about systems, working practices, work-in-progress and findings will be widely shared. The Centre will work to performance indicators that will be publicly available. Our work will be externally evaluated on the basis of value for money and its long-term impact on policy and practice.

Partnership and cooperation

The Centre aims to engage a wide range of partners and stakeholders to build stronger links between research, policy and practice, and to ensure that our work adds value to existing efforts. Through our research programmes we will engage practitioners in the research process and seek creative ways of including learners' perspectives. We will seek partners to co-fund, co-manage and conduct research.

Communication and dialogue with users

The Centre will engage in continuous dialogue with the policy, practice and research communities. We will produce timely, relevant messages for policymakers and practitioners to enable evidence-informed decision-taking and action for change. Equally, the Centre will respond flexibly to significant new trends and developments and the evolving views of stakeholders.

Key issues and influences

Four main factors have driven the creation of the Centre's strategy and programmes for the coming three years.

Deep-seated problems that are relevant to policy development and practice in post-compulsory learning:

- social exclusion
- inequality and cycles of disadvantage
- divisions rooted in social class, poverty, low qualification and skill levels in comparison with other advanced economies
- disengagement from the democratic process
- racial, cultural and religious intolerance
- millions of adults experiencing difficulties with the language, literacy and numeracy needed for everyday life.

Far-reaching changes and trends that post-16 policymakers and providers will need to address to provide learning for the 21st century:

- globalisation
- demographic changes and ageing populations across western countries
- the changing balance of public/private funding of public services and benefits
- the need for sustainable development and the environmental limits to human activity: making and doing more with less
- the information and communications revolution, and the speed of innovation and change in economies worldwide
- the development of e-learning
- the implications of free trade in education services across nations
- interdependence and transnational mobility of labour, skills and knowledge at all levels.

Government policies and new thinking, moving towards a learning society:

- ambitious targets for participation in higher education (HE)
- a drastic reduction in the number of people with language, literacy and numeracy difficulties
- universal achievement of Level 2
- promotion of learning as a key to improved life chances
- promotion of e-learning
- the balance of public/private financing and management of learning
- the role of leadership and management for improvement
- the changing nature of the teaching profession
- a need to shape vocational education to develop skills, science, technology, creativity and innovation for the economic needs of the future
- the implications of new disability rights.

The experience and knowledge of a wide range of research users who have identified research needs in an extensive consultation on the LSRC's priorities. The consultation outcomes included:

- endorsement of plans for sustained work on improving research impact and research capacity
- placing teaching, learning and learners at the forefront of research efforts
- ensuring that the priority issues identified are best tackled through research.

Developing programmes of research

From analysing the key factors set out above and consulting extensively on research needs, the Centre's research strategy has been organised into five programmes:

- Participation in Post-compulsory Learning
- Vocational Learning, Skills and Work
- Developing Learning and Teaching
- The Organisation of Learning
- Developing the Workforce for Post-compulsory Learning.

Underpinning these five programmes is a focused strategy designed to increase the impact of research, develop research methods, build research capacity and develop knowledge-management systems. This Building Effective Research strategy will focus on developing capacity and innovation. It will investigate how to enable impact and ensure that research evidence is clear, timely and used effectively for policy and practice.

Links between programmes

The five programmes and the Building Effective Research initiative are described on pages 9–27, setting out for each one the central research questions and our priorities for the first year. It is inevitable that some research questions will be relevant to more than one of the programmes. We will ensure that there is communication across programmes to inform related work and avoid overlap.

Strategy roll-out

The roll-out of the strategy will be staged across years. The timescales for commissioning research, key milestones, dissemination and promoting the impact of the research will be made available on the website.

Ensuring flexibility

The period of the LSRC strategy is 2002–5. However, significant new issues can emerge quickly, so flexibility will be essential to the Centre's approach. We will review annually the priorities and activities within the five programmes to ensure that their focus remains timely and that the projects within them can incorporate significant new developments, concerns, perspectives or policy developments.

LSRC research programmes

- Programme One:**
Participation in
Post-compulsory Learning
- Programme Two:**
Vocational Learning, Skills and Work
- Programme Three:**
Developing Learning and Teaching
- Programme Four:**
The Organisation of Learning
- Programme Five:**
Developing the Workforce for
Post-compulsory Learning

Why participation matters

How to increase and widen participation in learning beyond compulsory education has long been viewed as a critical strategic question. Participation in learning throughout life is accepted as a vital element in achieving a healthy economy, culture and society. Research evidence and creative thinking are needed to support the development of future policy culture change, and the achievement of current ambitious policies that aim to address a range of accepted problems and challenges:

The economy

- A significant percentage of the population lacks successful engagement in education and training, which leads to high numbers of low-skilled, unskilled and unqualified people who may be at risk in a high-skills economy
- The difficulty of motivating employers to support the development of lower level and generic skills, which they view as being the role of initial education
- The need to sustain an internationally competitive economy, developing a more productive knowledge base to support commerce and industry and contribute to regional and local economic regeneration
- Demographic change, pointing to an ageing population, with fewer people in the current 'working-age' group and an increasing number of longer-living older citizens, results in the prospect of working longer and caring for adults in the 'fourth age'
- Significant numbers of young people not in education, training or work
- Changes in technology that may threaten many traditional jobs and shift the balance of what machines and people do in the workplace.

Society and culture

- Decreasing levels of voluntary engagement in social, community and membership activity – the social capital issues
- 'Apathy' or disaffection with the democratic process
- Social disadvantage including homelessness, poor housing, deprived neighbourhoods, groups of young people at risk in terms of crime, drugs and antisocial behaviour
- Evidence of the need to foster a widespread culture of learning among people of all ages and from all social and ethnic groups
- Disharmony between ethnic and religious communities in many cities and towns, with evidence of intolerance, lack of mutual understanding and racism
- Millions of adults whose lack of literacy, language and numeracy skills hinder their potential in daily life and work.

Equality and diversity

- A growing social divide between those who can access and use information, including the new technologies, and those who cannot
- Inequality and poverty remaining at unacceptable levels, with evidence that the poorest neighbourhoods suffer the poorest public services
- Strong evidence that those with low or no school-leaving qualifications do not participate because they do not have access to learning opportunities, or do not feel that the learning opportunities on offer are for them
- Inequalities persisting for people with disabilities or learning difficulties, for adults who need better language, literacy and numeracy skills to fulfil their potential, and for people in prison or who have left prison
- Continuing disparity in participation levels between different ethnic groups, age groups, social classes, women and men.

Key elements of the programme

The concept of participation often rightly encompasses access to learning, successful continuing engagement, attainment and the outcomes of learning. However, stimulating demand for learning and widening participation are such major challenges for the future that the main focus of the participation programme will be to deepen our understanding of what motivates people to engage in learning, as the first stage of the participation process, and to look at issues of equality. Curricula and learners' achievements will be key concerns for Programmes Two and Three.

From the key areas identified, the Centre will prioritise research to address key questions focused on society and culture and equality and diversity. Issues about the economy are the central concern of Programme Two, Vocational Learning, Skills and Work.

Society and culture

The work will encompass research that addresses key questions about participation in social, cultural and economic life, as well as active citizenship. The role of learning in communities, neighbourhoods and families will be an important focus, as will the role of schools and colleges.

- What is the potential role of different types of learning 'intermediaries' – agencies, professionals, voluntary and community groups and individuals who act as catalysts, 'brokers' or change agents for learning? This work will examine models of brokerage and relationships that add value and enable wider participation in learning.
- Can the concept of 'learning', including 'mainstream' learning, be broadened to include a variety of informal and community-based activity, including learning that does not rely on the progression of participants to institutions of 'formal' learning? Research will concentrate on informal and community-based learning as a source of increased demand, in parallel with work already scheduled on mapping non-formal learning in Programme Three, Developing Learning and Teaching.
- What is the international evidence of the impact of large-scale campaigns to attract new groups of people into learning?
- How can knowledge of 'what works' be applied more effectively to generate strategic, systemic and sustainable change in policies and practices, rather than creating new initiatives and greater complexity?

Equality and diversity

- Several years after the Tomlinson Report, *Inclusive learning*, placed learners with learning difficulties and/or a disability at the centre of its proposals for an individualised curriculum for *all*, how can the step change needed to advance the building of inclusive provision be achieved?
- What are the next big steps to help eliminate inequality in access to post-16 learning for ethnic minority groups, working-class communities, socially-at-risk groups and older learners?
- On the basis of currently envisaged trends, what are the prospects for participation in post-16 learning by different social, age and ethnic groups?

The first year's work will focus on:

- the role brokers and intermediaries can play as enablers of participation.

Why work-related knowledge and skills matter

The UK is a major world economy, but evidence shows that we have a low skills base, notwithstanding a relatively large graduate population. There are concerns about productivity rates, and the fact that we have a relatively weak system of vocational education and training (VET). The active engagement of employers as stakeholders in the VET system is weak. Yet there is increasing evidence that a skilled and flexible workforce is a precondition for future economic success. Learning systems are needed that provide connectivity between theory and practice to support the application of knowledge and enable the development of skills in fast-changing vocational settings.

Globalisation

The 21st-century economy will be increasingly globalised, fuelled by fast-changing scientific and technological developments. Local and regional economic development will remain important, relying on a high percentage of micro, small and medium-sized enterprises (SMEs), and ready access to human capital. Analysts and policymakers forecast increasing dependency on high skill levels with a strong knowledge and information base. There is evidence from other economies that high-quality VET can be a key ingredient in economic success. We need to know how the learning system in England and Wales can most effectively support the economy, and how it should be organised and funded so that both the content and the style of learning and teaching support the working environment.

Vocationalism

The new demands of the economy mean accelerating our responsiveness to the needs of the workplace, and continually sharpening and updating work-related learning. There are concerns about the effectiveness of current vocational learning and teaching both on and off the job. There are concerns over systemic failures and debate about how the responsibility for paying for this work-related learning should be balanced between the state, employers and individuals. Vocational learning takes place in diverse contexts: further education (FE) colleges, universities, private and voluntary-sector organisations. This learning is increasingly led from the workplace, with developing roles for employers, trade unions, workplace supervisors and mentors, learning representatives and individual learners. There is growing interest in how informal learning takes place at work, and the extent to which the workplace is able to boost participation in, and provide an effective medium for, lifelong learning.

Parity of esteem

Parity of esteem between academic and vocational education remains an ideal: numerous policy initiatives have failed to make it a reality. It is critical because it offers a departure from the association of vocational education and training with craft skills at technician levels and below. A redefinition more fitting for the 21st century would recognise that in a fast-moving economy based on communications and technology, applied learning in a vocational context is required at higher levels. Parity of esteem, it is argued, could attract a greater number of high achievers into vocational learning, as well as 'pulling through' learners with more modest attainments, as the way to secure and sustain a highly skilled, knowledgeable and well-qualified workforce.

A related issue is the extent to which academic and vocational programmes and qualifications are linked to divisive assumptions about social class, which can undermine career opportunities, economic dynamism, entrepreneurialism and social cohesion. Helped by evidence from other countries, we need to know how to raise the profile and status of VET in the UK at every level and how change in the curriculum can undermine unhelpful divisions. We need to know how perceptions of the relative worth of VET have been changed elsewhere, with a resulting increase in the take-up of VET by a broader range of young people before they start work and by adults during their working life, including those at professional and managerial levels.

Key elements of the programme

There are several linked elements to the programme:

- securing a vocational learning system for the 21st century
- involving employers in vocational learning
- improving vocational learning and teaching
- providing a relevant and responsive vocational curriculum
- raising participation in work-based learning (WBL).

Within each of these elements, research questions have emerged, from which projects will be shaped and prioritised.

Modelling a vocational learning system for the 21st century

- What should a modern system of vocational education and training look like?
- How could the responsiveness of education and training providers to employers and the labour market be improved?
- What would be a sustainable balance of responsibilities for the provision and resourcing of vocational education and training between individuals, employers and the state?
- Can we gain a clearer picture from research evidence of the links between higher skills, productivity and economic growth?
- How should the VET system address demographic trends, such as the increasing proportion of older workers and older learners?

Involving employers in vocational learning

- When and how does active involvement in vocational learning and skills development by employers result in improvements in VET? How can employer engagement be increased?
- Are there effective strategies for engaging SMEs in vocational learning?
- What do employers really know and value about qualifications?
- Do employers understand the skills, knowledge and competences that the qualifications accredit, and do they value these?
- Do employers use qualifications, and if so, what for – to recruit or promote staff, or to identify the employer's human resource?

Improving vocational learning and teaching

- What is the most effective combination of learning and teaching approaches in different work-related contexts?
- What knowledge, skills and dispositions are best learned in the workplace and what are best learned off the job?
- How do we build better and stronger links between formal and informal learning in relation to VET? What types of formal and informal learning are most relevant to VET?
- In what circumstances can peers, managers, supervisors and trade union representatives effectively support and engage individuals to learn in the workplace?

Providing a relevant and responsive vocational curriculum

- Is there a credible vocational pathway to Level 3 (Intermediate) skills?
- What routes are available and actually taken to achieve Level 3?
- How successful are they for learners?
- What are the barriers?
- Where do learners go and for what purposes after Level 3?
- In what circumstances does specialisation secure excellence in vocational learning? What are the emerging patterns of specialisation in the UK and other countries?
- What should be included in the content, delivery and assessment of outcomes to develop the right skills and knowledge for economic success?
- How could we develop ways of recognising the value added by work-based learning?
- How can successful vocational learning be developed from age 14 to late retirement?

Raising participation in work-based learning

- What impact does the image of vocational learning have on participation, and how does this differ from other countries?
- What is the current state of ethnic minority participation in the vocational route, and could it be improved?
- Does involvement in VET assist people with disabilities or learning difficulties to secure employment?
- Can the workplace be an influence on, and a place for, engagement in learning?

The first year's work will focus on:

- an effective VET system for the 21st century, enabling access and coherent routes to successful learning for individuals, employers and the economy.

Why we need to know more about developing effective learning and teaching

It is a priority for government and educationists to improve attainment among post-16 learners and the quality of their learning environments. Connected to this, it is a priority for the LSRC to help establish and extend our knowledge of pedagogy and how people learn. At the same time, the Centre will vigorously explore new questions in areas where we are now witnessing important developments, such as the application of information and communications technology (ICT) in learning, the development of e-learning, curriculum design and innovative learning environments.

Critical issues arise both in areas where we already have considerable knowledge, and in areas where there is much that we do not know. We know a good deal about what makes for productive learning environments, and it is widely accepted that formative assessment has a vital role to play in promoting learners' confidence and understanding. However, much work remains to be done to apply and test our knowledge in the distinctive environments that make up the post-16 sector. How should tutors best engage with the initial understanding of underconfident and reluctant adult learners? How are learners best encouraged to organise their learning in ways that enable retrieval and application?

Several areas within learning and teaching remain largely underexplored, so there is scope for innovative and exciting new research. For example into:

- the nature of non-formal learning, and how it contributes to the pursuit of formal learning and work-based activity
- how best to foster creativity through pedagogy or curriculum design
- the impact of many recent changes to post-16 curricula
- the effects of ICT on the acquisition, forms and dissemination of knowledge.

In these, and other areas, post-16 literature reviews are needed and in short supply, as has been acknowledged by the DfES, the Economic and Social Research Council (ESRC), and the participants in the LSRC's consultation and needs analysis.

There is a vast literature on the general subject of how people learn, including comprehensive reviews and overviews of the literature. The LSRC will need to establish what is known about post-16 learning, including research into where pre-16 research is relevant to the often very different world of post-16 learning.

An important question is whether we can say anything about learning independent of its context and content. We cannot assume that conclusions that apply in one context will also apply in another. Post-16 learning takes place in diverse arenas: schools, colleges, universities, community-based learning centres, clubs, the workplace, and the home. It is a priority to ensure that research into learning takes account of domain, discipline, skills, knowledge, and types of learners.

Pedagogy is less widely researched than learning. It is a priority both to establish what is known by means of literature reviews and to pursue new research that takes account of any distinctive features in the learning environment and in the cohort of learners under review.

Quite often, theories about post-16 learning gain credence before being subjected to rigorous tests and assessment. In the areas of thinking skills and learning styles, for example, terms and models are now widely used despite continuing debate about whether they stand up to close scrutiny. It is important to satisfy ourselves that influential ideas are subject to exacting standards of assessment.

The nature and standards of learning and teaching are sensitive to curriculum development and assessment regimes. It is a priority to investigate how developments in assessment regimes and curricula have an impact on pedagogy, learners' attainment, progress and success in learning and the ability to progress to further learning and development.

Curriculum design raises several critical issues:

- in view of the many recent and anticipated changes to the 14–19 curriculum and qualifications, it is becoming increasingly important that we pursue research into the impact these changes will have on those learners most affected by new developments
- there is enormous potential for new research into the question of how curricula either impede or promote creativity among post-16 learners
- we need to know more about the impact of assessment regimes on learners' attainments in both accredited and non-accredited programmes
- we need to take particular account of curriculum developments affecting 14- to 16-year-olds, to explore the implications both for 16- to 19-year-olds and for adults throughout their lives.

Research into effective pedagogy and successful learning environments needs to focus on the developing uses of ICT in learning and teaching. Many are convinced that ICT heralds a revolution in learning and teaching. Others believe that it promises more modest change to existing practice. Research literature indicates a growing consensus that ICT is most effective when combined with human interaction. We need to establish the evidence of the potential ICT offers learners and learning and evaluate its impact. It is also a priority to assess the impact of ICT on the role of the teacher and on relationships between teachers, other education professionals and learners.

Key elements of the programme

Within each of the linked elements in the programme, research questions have emerged, from which projects will be shaped and prioritised.

Pedagogy, learning and teaching

Non-formal learning

- What are the primary types of non-formal learning?
- What are the conditions in which non-formal learning flourishes in such places as the workplace and the community?
- What is the relationship between non-formal and formal learning, and what can be done to improve the contribution of the former to the latter?

Mixed-age learning

- What is the impact of age mix on education outcomes?
- What is the impact of age mix on learning and teaching relationships?
- Is age mix a factor in what makes a programme of study attractive to potential students?

Learning styles

- Which taxonomies of learning styles are backed up by sound theoretical and evidential support?
- In which areas do we have extensive knowledge, or knowledge that is widely agreed on, and what are the implications of this for learning and teaching?
- In which areas is knowledge sparse, non-existent, or highly contested, and what are the most important unanswered questions for research?
- What, if anything, is the contribution of the theory of learning styles to our knowledge of how people learn?
- Which models of learning-style informed pedagogy have succeeded and which have failed, and why, and with respect to which type of learners?

Thinking skills

- Which taxonomies of thinking skills are backed up by sound theoretical and evidential support?
- In which areas do we have extensive knowledge, or knowledge that is widely agreed on, and what are the implications of this for learning and teaching?
- In which areas is knowledge sparse, non-existent, or highly contested, and what are the most important unanswered questions for research?
- What, if anything, is the contribution of thinking skills to our knowledge of how people learn?
- Which models of thinking-skill informed pedagogy have succeeded and which have failed, and why, and with respect to which type of learners?

Information and communication technologies in learning and teaching

- What do we know about the extent to which ICT facilitates either substantive innovation in learning and teaching or improvements in existing practice? Are we doing old things in a new way or doing new things?
- What are the effects of ICT on the acquisition, forms and dissemination of knowledge?
- What is the impact of ICT on the role of the teacher, and on relationships between learners and teachers?

Curriculum, assessment and qualifications

- What shape should the curriculum for the 21st century take? How can the curriculum keep pace with changes in the economy, society and the development of new knowledge and technologies?
- How is learners' creativity best developed in formal, informal and work-based learning environments?
- How could the curriculum foster creativity among learners?
- What can the assessment regimes of other countries tell us about the effectiveness of UK regimes?
- What is the impact of assessment regimes on learners' attainments in both accredited and non-accredited programmes?
- What are the effects of formative assessment and summative assessment on learners' progress and progression?
- What is the evidence of the impact of curriculum developments on the level of learners' attainments, starting with the 14–19 age group?
- What is the relationship between assessment regimes and forms of curricula on the one hand, and preferred learning styles on the other?
- What forms of assessment are best suited to promoting learners' confidence to learn in non-accredited provision?

The first year's work will focus on:

- non-formal learning and its relationship to formal and work-based learning, including the impact of assessment regimes, and the challenges of assessing informal and e-learning.

Why we need research to help shape the post-16 system of the future

The future will require significant changes in the way learning is organised and supported. External developments and ambitious policies already point to major changes needed to deliver new systems and education institutions fit for the future. They also offer exciting new opportunities and possibilities for innovation and improvement.

This programme will ask what shape, structure and organisation will be needed for a successful post-16 learning system in 10, 20 and 30 years' time. A 10-year span has been set for the Learning and Skills Council to secure a successful system for all publicly funded learning, planned and engineered at national and local levels to meet market needs.

Schools, FE colleges, sixth-form colleges, work-based training providers, local education authorities (LEAs) and the adult community and voluntary sectors are diverse in their remit, culture, history, funding, staffing and size. How can they form a coherent whole, to raise participation, retention and levels of achievement?

The wider context is changing rapidly. Free trade in education services between nations is likely. E-learning is developing fast. We will need to assess the impact of privately owned knowledge products such as information technology (IT) vendor qualification systems. Western countries are facing major demographic change, with ageing populations supported by a smaller workforce. An enlarged European community and indigenous skills shortages are likely to spur movement of labour across countries for skills at all levels. How far will the workplace of the future change, in its nature and location? There is a need to identify issues that are beyond the range of current political thinking, such as the role of national education systems in the context of a truly global economy.

Different forms of ownership of education provision, with private-sector engagement, are already developing in schools and have a long history in work-based learning. Community and voluntary organisations are major providers of adult and community learning (ACL). How might this develop in other organisations of post-16 learning? What are the implications of substantially contracted-out arrangements for delivering learning? What are the issues for democracy, accountability and governance?

Current policies propose massive increases to the higher education system, with an expansion of vocational HE. How much learning can the state afford if participation and successful learning increase? The question of who finances learning, and the impact of financial decisions on systems, providers and individuals will be critical.

A central focus for the LSRC will be to help stakeholders identify and understand the impact on learning of such wider social and economic change. This programme will address the issues from a 'supply-side' perspective. While some major issues are already on the policy agenda, others are not. The medium- and long-term implications of policies and wider trends are not clear. Trend analysis and scenario-building can help policymakers understand the direction of probable change.

Key elements of the programme

The research questions within this programme that have emerged from consultations with stakeholders can conveniently be grouped under two broad areas:

- financing learning in the future
- the learning institutions of the future.

Financing learning in the future

The LSRC will examine the shifting balance between public and various forms of private funding, as well as funding mechanisms and comparative costs. There will be a strong international dimension to this programme. Key questions are:

- What is the impact of financial arrangements on widening participation?
- How might the balance of responsibility for financing learning need to change, and what might be the cultural consequences?
- What is the impact on the sector of increasing the use of short-term and project-based funding?
- What can we learn from other countries about the financing of post-16 learning?
- What is the impact of linking funding to learners' achievements?
- How will the formula-based funding approach developed by the LSC impact on providers and provision?

The learning institutions of the future

There is a need to examine the varied contexts in which learning will take place in the future, and their implications for the way provision is secured, planned and managed. Key questions are:

- What might be the impact and cost of new models of delivery?
- What will be the organisational forms of learning in the future?
- In what forms of organisation do what types of learning flourish? What might be the role of voluntary, mutual and private organisations?
- What are the links between specialisation and excellence in the learning and skills sector, and what is the impact of specialisation on successful learning at higher levels?
- What will be the likely pattern of demand for the major elements of post-compulsory learning during the next 20 years?
- To what extent will the future pattern of provision be based on competition and to what extent on planning?

The first year's work will focus on:

- funding learning in the future, to include identifying: what different groups of individuals think and do about financing their own and their families' learning; what we can learn from other countries about the financing of learning.

Why we need research into developing the workforce

The learning and skills sector experienced massive changes in the last decades of the 20th century and looks set to experience even greater changes during the 21st century. These changes have had, and will continue to have, a significant impact on the nature and development of the post-compulsory learning workforce.

The declining number of full-time FE lecturers, the increase in private training providers and the use of teacher supply agencies provide recent examples of structural workforce change. The growth of e-learning, globalisation of education services, and the expansion of privately owned education provision and learning in the workplace will further shape how the workforce is defined, employed, managed and developed. We need to know much more about the emerging post-compulsory learning workforce to ensure the sector is prepared to meet the challenges of the next century.

Issues of participation, retention and achievement affect the post-compulsory learning workforce as much as its students. How will the sector as a whole ensure staff with the best skills for the future are recruited, retained and enabled to achieve high levels of performance? Without the effective contribution of leaders, managers, teachers and support staff, how can the sector change positively to embrace the future?

Research into the post-compulsory learning workforce needs new data, fresh approaches and innovative ideas. The sector and its workforce are characterised by tremendous diversity, not only between the main sub-sectors of school sixth forms, further education, work-based learning and adult and community learning, but also within each of these. Much more is known about staff in FE, for example, than about WBL and ACL providers. Holistic, sector-wide research should be encouraged in this area.

We can expect that the changing learning and skills development needs of society and the economy will require new approaches to learning and teaching. But do we know who the teachers of tomorrow will be, how they should best be led and managed, or who will support the learners of the future?

Research in this programme will move forward on several fronts. We need to:

- establish quantitative baseline evidence outlining the actual numbers of staff employed today (and on what basis, for how long, and with which skills) in order to see the possible shape of the post-compulsory learning workforce of the future
- discover what types of leadership and management work to improve participation and achievement and make the step changes needed to help create a learning society and a successful economy based on high skills, knowledge and innovation
- know how the roles of teachers and those who support learning will change in the 21st century, and what forms of initial and continuing professional development will enable them to fulfil their new roles most effectively
- understand much more about the enduring workforce development needs of all staff arising from the growing use of ICT, and how these needs can best be met now and in the future.

Key elements of the programme

This programme has four interlinked strands:

- workforce trajectory analysis
- leadership and management
- teaching and supporting learning
- ICT skills.

Workforce trajectory analysis

Quantitative research into how the post-compulsory learning workforce will develop in the future will provide the overarching framework for the other research strands within this programme. Baseline sector-wide data on the nature of the workforce today is needed to establish trends and forecast how the workforce will develop in the future. The LSRC will develop an approach, in collaboration with the Sector Skills Development Agency (SSDA) and the Sector Skills Councils (SSCs), that aims to add value to their research and development role in this field:

- How has the workforce changed over time and in relation to regional, national and international comparator labour markets?
- What are the main trends in the demand and supply for skills currently, and those likely to emerge in the future? Is there now, and will there be in the future, a mismatch of skills and labour availability in the sector?
- Can the analysis of current skills gaps and skills shortages establish trends with which to forecast future workforce development priorities?

Leadership and management

Effective leadership, coupled with good management, is increasingly seen to be a critical factor in improving quality and standards in post-compulsory learning. A new college for post-16 leadership and management is proposed. Key research questions to inform policy development include:

- What leadership and management behaviours are most effective in improving learning outcomes and student achievement?
- What can research tell us about the contribution of diversity in the types and styles of leaders, and how can we learn from different ways of practising leadership, in terms of gender and cultural differences?
- What approaches to leadership and management development have the most impact on leadership behaviour?

Teaching and supporting learning

The changing contexts of learning will demand new skills and new roles from those who teach and support learning. Skills gaps affecting staff include: management, pedagogy, supporting online learning and general ICT use, teaching the disaffected, and research and development capability. Key research questions to inform policy development include:

- How will the roles of teachers and learning support professionals change in the coming decades?
- What forms of initial and continuing professional development for full- and (crucially) part-time teachers and learning support staff best fit the changing nature of learning and teaching?
- What are the professional development needs of those who support learning and assessment in the workplace?

ICT skills

In the future, ICT will play a much greater role in the provision of online learning environments, materials and opportunities. The workforce development challenge implicit in this change should not be underestimated, especially where ICT skills for learning and teaching support staff are concerned. General ICT skills also need to be developed in many occupations, often as a basis for future online learning provision. Key research questions to inform policy development include:

- Do staff working in post-compulsory learning have the skills, training and qualifications they need to make best use of ICT?
- Are high levels of ICT skills, training and qualifications concentrated in particular occupations and parts of the sector? How can high skill levels be transferred to other occupations and parts of the sector?
- Which approaches to ICT training have proven most effective when applied to the development of new approaches to learning and teaching? How can these be extended, adapted and adopted for use elsewhere?

The first year's work will focus on:

- the leadership behaviours needed to create tomorrow's successful learners.

Why more effective research matters

It is widely accepted that post-16 learning is under-researched and under-theorised. Research-based evidence, analysis and new thinking and conceptual frameworks need to play a more significant role in the planning and provision of education. Policymakers and practitioners in education need to be able to draw more systematically on the outcomes of research. While debate, consultation and practical experience are important aspects of decision-making, deeper understanding, greater knowledge and more useable evidence is increasingly required. The wish to build and make use of the evidence base for developing policy and for enhancing practice is a central feature of government statements and ESRC initiatives.

The development of the role of research has implications for the worlds of practice, policy formation and development, and for research itself, including:

- the nature of research, its scope and quality
- involvement of potential users in its design and interpretations
- the relationship of research work to development activity and to practice
- hallmarks of quality – timeliness, duration and utility of research are as important as reliability and validity.

Within this strategy, both research and development work will be carried out to increase the effectiveness of research, initially within the programmes and networks of the LSRC and the Learning and Skills Development Agency. Through the Learning and Skills Research Network (LSRN), and other links, we hope to extend the scope of the initiative to research and development undertaken and used elsewhere.

Key elements of the Building Effective Research strategy

The primary purpose of the LSRC's Building Effective Research strategy is to enhance the influence of research on policy and practice. This will involve researching strategies for impact, building up the capacity to do and make use of research, and diversifying the approaches used. At present, this is visualised in three interrelated strands:

- strategies for optimising research impact
- building capacity
- developing research methods.

Strategies for optimising research impact

The objectives of this strand are to:

- investigate ways of designing research projects to optimise their influence on practice and policy
- adapt existing knowledge about ways of engaging effectively with key agents of change in the practice and policy communities
- investigate approaches and resistances to exerting influence at the individual and organisational levels
- develop ways of working with potential research users and a spectrum of researchers and practitioner-researchers to disseminate research messages more effectively among practitioners and policymakers
- inform the development of the processes of publishing, training and communicating in pursuit of the programme aim
- investigate ways of synthesising messages from new and pre-existing research and development to enable better use to be made of them.

We will investigate how research can be made more influential and will develop practical means to achieve this. This will straddle the work of the LSRC, the LSDA as a whole, and the associated Learning and Skills Research Network.

A further development may extend the focus of work from the impact of research to the impact of practical initiatives or interventions.

Building capacity

The rationale for this strand of Building Effective Research derives from concerns at national policy level, expressed by a working party of the DfES National Education Research Forum, and leading to the formation of a Research Capacity Building Network for the ESRC's Teaching and Learning Research Programme based at Cardiff University. Concerns include:

- how to sustain a sufficiently large research workforce
- the shortage of specific skills, notably in the use of quantitative methods
- the capacity to make effective use of research in the policy and practice communities.

Activity to support the work of the LSRC will focus on:

- developing a network of researchers and research users across the various parts of the learning and skills sector and HE
- publishing work from all parts of the learning and skills sector in a journal
- organising conferences regionally and nationally to enable researchers, developers and practitioners to communicate and develop research together
- providing a research and development toolkit to encourage the growth of understanding and skill
- funding regionally based research projects through the network
- piloting a secondment programme for practice-based researchers and developers.

Developing research methods

Research and development activities are shaped by the tradition within which professionals operate. Researchers in curriculum and staff development have made extensive use of good practice studies; marketing and participation studies use statistical, survey and interview approaches; researchers in strategic planning may make use of international comparative studies or labour-market trend analysis.

To build evidence to help with the development of policy and improvement of practice we need to draw on the full gamut of methods. Research design, starting from problems and trends in the practical world, should make use of a variety of methods which, taken together, may yield trustworthy evidence.

To do this, unfamiliar methods need to be introduced throughout the research, policy and practice communities, with a view to:

- spreading awareness of their strengths and weaknesses
- encouraging project design to make best use of these methods
- encouraging wider use of these previously unfamiliar methods.

Current activity supporting the work of the LSRC includes:

- discussion seminars involving specialists from across the learning and skills research community
- research skills training for practitioners and members of the LSRC delivered within the LSDA, the LSRN, schools, colleges and other settings
- supported piloting of new methods and approaches
- creation of an LSRC partnership for quantitative methods with the University of London Centre for Longitudinal Studies
- piloting a systematic review within the framework of the DfES Evidence for Policy and Practice Information and Coordinating Centre, based at the Institute of Education
- developing an LSRC approach to research reviews.

A priority for later work will be to draw on the lessons of the LSRC review, *Models of research impact*, to build impact strategies into the Centre's work. Further elements of the strategy will be developed in the light of consultation.

The first year's work will focus on:

- effective models of research impact.

Context

In the past, major policy development and changes in how post-16 education and training is managed and delivered have not been subject to systematic research. However, in recent years the government has supported the development of evidence-informed policy and the use of research to improve practice. The DfES has established a National Educational Research Forum and is looking to other sectors, such as health, to see how research can make a stronger impact on policy and practice. It is also developing a wider range of research methods to provide a stronger evidence base. A number of major research centres have been established by the DfES which focus on all phases of education. These are:

- Centre for the Economics of Education
- Centre for Research on the Wider Benefits of Learning
- Evidence for Policy and Practice Information and Coordinating Centre
- Adult Basic Skills Research and Development Centre
- National Research Centre for ICT in Education, Training and Employment.

The LSRC is the first centre sponsored by the DfES to focus solely on post-16 learning.

How the LSRC is funded

The LSRC is funded by the DfES and the Learning and Skills Council. It will have an annual budget of £1m for the external commissioning of research and related activity. The Centre will also seek to add to its funding through sponsorship and partnership.

Commissioning process

The Centre will commission research through competitive tender, advertised in the national press and on the LSRC website, with wide circulation of information to the research community. The commissioning process is detailed on the website. We will seek advice from external experts and stakeholders, through 'merit' and 'peer' reviews, and by consulting advisory groups.

Relationship with the LSDA

The LSRC is based at and managed by the LSDA. It draws on the expertise of the LSDA's research managers and research services, such as the Statistical Service, the Survey Research Unit, and the Library and Information Service. The LSRC's programme of work is separate and distinct from LSDA research activity. It is conducted by external suppliers and partners from the research community, guided by the LSRC's Advisory Forum and the LSDA's research managers.

Partners and stakeholders

The LSRC will work with a range of partners and stakeholders, including:

- universities and other HE institutions
- independent research and consultancy organisations
- international research organisations
- specialist institutes
- think-tanks
- the policy community: government departments, particularly Education and Skills; Work and Pensions; Culture, Media and Sport; Trade and Industry; Health, and the Home Office
- major government agencies
- information, advice and guidance services
- Sector Skills Councils
- organisations of and for people with learning difficulties, and of and for people with disabilities
- representative bodies in further education, schools, adult and community learning, work-based learning, the voluntary and community sectors and higher education
- employers and their associations
- trade unions and employee organisations
- teachers and learners and the leaders and managers of post-16 learning
- groups in healthcare, social care, social exclusion, community development and criminal justice
- economic development agencies.

Advice from experts, users and other stakeholders

For each of its programmes, the LSRC will draw on groups of expert advisers from the research, policy and practice communities. We will seek their contribution at all stages, from the design of projects, the selection of tenders, the monitoring and support of projects, to the dissemination and impact phase. Members of the Advisory Forum will play a key role in shaping arrangements for guidance on programmes.

Engaging practitioners, learners and users

LSRC programmes will encourage practitioners to engage in research dissemination, as well as in further developmental and action research activities to ensure research has an impact on practice. We will seek the perspectives of learners to inform research priorities and perspectives.

Supporting the research community in post-16 learning

The Centre aims to act as a 'hub', supporting research partners by better sharing of information, developing networks, publishing research reviews, sharing work in progress and interim messages, and promoting its findings widely.

How to contact the LSRC

The LSRC welcomes continuing interaction with researchers and research users. Please contact us with your questions, ideas and information.

Feedback should be sent to:

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