Successful Futures

Independent Review of Curriculum and Assessment Arrangements in Wales

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Letter to the Minister for Education and Skills

13 January 2015

Dear Minister

In March 2014 you asked me to conduct a fundamental Review of Curriculum and Assessment Arrangements in Wales from Foundation Phase to Key Stage 4. I am pleased to present the report arising from that Review for your consideration.

I must again express my appreciation for the very positive and constructive response there has been to the Review from across Wales. The Review Team has visited schools across the country and seen at first hand many examples of excellent work. We have heard the views of headteachers, teachers, children and young people and parents and carers, and have engaged more widely with a very broad spectrum of Welsh experience and opinion. The excellent response to my call for evidence, including over 300 responses from children and young people, has made an important contribution to my thinking. I have also drawn on leading international experience and research in determining recommendations for Wales. Taken as a whole, this very strong body of evidence provides a secure foundation for my conclusions and recommendations.

My proposals are radical and wide-ranging. They are interrelated and should be seen as an integrated set and not separately. They build on the many existing strengths of Welsh education and aim to provide both a vision for the future and a means of realising that vision that is coherent and manageable. I have, in line with my remit, offered proposals for implementation that build from experience of major curriculum reforms in Wales and internationally. Securing the sustained and active participation of educational practitioners and the wider community will be central to that process.

The title of the report, *Successful Futures*, signals the vital importance of schools to the future success and well-being of every child and young person in Wales and to the country as a whole. I am confident that the proposals in this report will provide you and the wider education community with the means to further strengthen that contribution.

Yours sincerely

Professor Graham Donaldson CB

Acknowledgements

In undertaking this Review I have had the privilege to meet a wealth of people who are passionate about achieving a world-class education for the children and young people of Wales. The evidence gathered in these meetings, coupled with the opportunity to see at first hand examples of excellent work already in place, has been of tremendous value, and for this I am most grateful. The recommendations in my Review suggest a need for significant change, but this must not take away from the real strengths in the Welsh education system upon which this report is built.

I would like to take this opportunity to thank all those who engaged with the Review and shared their thoughts and their experiences in relation to curriculum and assessment arrangements. I am particularly indebted to all the headteachers, teachers, children and young people, parents and carers and the extensive range of organisations, groups and individuals who gave up their time either to share their views in writing or to meet with me and my team. I am also very grateful to the trade unions for their constructive engagement, including the opportunity to meet members and to address conferences.

I am grateful to those who assisted with disseminating the call for evidence, the response to which exceeded 700, including over 300 from children and young people. I would also like to thank The Wales Institute of Social and Economic Research, Data and Methods (WISERD) who undertook an analysis of the responses and Professor Pamela Munn for her advice on this aspect of the Review. Their resulting report formed an important part of our considerations.

I am indebted to Her Majesty's Chief Inspector (HMCI) Ann Keane for her challenge and encouragement as well as for agreeing to the release of two inspectors to work in my team. I am also very grateful for the vital support given to the Review by my external advisers, Claire Armitstead, Owain ap Dafydd and Kevin Tansley, and for the influential advice provided to me and the team from Dr Gill Robinson. I would also like to acknowledge the input of colleagues from within Wales and beyond who provided a range of interesting perspectives on educational developments and best practice and who participated creatively in our discussions.

I would like to express my sincere thanks to the Minister for Education and Skills, and wider Welsh Government officials for their unwavering support and enthusiasm in enabling me to undertake this independent Review.

The Review was very much a team effort and special thanks go to those who have worked closely with me over the last eight months. I am indebted to Sarah Morgan and Nigel Vaughan for their patience, professional advice and support throughout. My civil service team of Kerry Davies, Denize Morris and Megan Powell, superbly led by Jo Trott, looked after me wonderfully and were both creative and indefatigable in the face of continuous and often unrealistic demands from me.

All of those mentioned bear no responsibility for the content of this report but have been invaluable in its development.

Graham Donaldson

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Chapter 1: Overview

In commissioning this Review of Curriculum and Assessment Arrangements, the Welsh Government recognised how important it is that each child and young person in Wales should be able to benefit from curriculum and assessment arrangements that will best meet their present needs and equip them for their future lives. Our children and young people only have a relatively short time at school. We must use that time judiciously and productively to help each one of them to grow as a capable, healthy, well-rounded individual who can thrive in the face of unknown future challenges.

Wales is not unusual in its desire to ensure that all its children and young people benefit from relevant education of the highest quality. Internationally, there has been an increasing trend for countries to see a two-way relationship between the quality of their education systems and the wider health of their society and economy. As part of this trend, the nature of the school curriculum has, in many countries, become a strongly contested area of national policy. What our children and young people learn during their time at school has never been more important yet, at the same time, the task of determining what that learning should be has never been more challenging.

This Review has provided the opportunity to revisit and reassert the fundamental purposes of education for the children and young people of Wales and to recommend curriculum and assessment arrangements that can best fulfil those purposes.

What do we mean by the 'curriculum'?

The curriculum has often taken the form of a framework of subjects to be taught over a defined period such as particular stages of primary or secondary education. That framework might be very general or more specific and might include, for example, time allocations for each subject together with descriptions of what content should be covered at different stages. Essentially, this approach to the curriculum involves defining the inputs that all children, or particular groups of children, should experience and is reflected in the approach adopted in many countries, including Wales, in the latter part of the last century. It is also generally based on a belief that subject knowledge has stood the test of time and remains the best path to a sound and relevant education.

An alternative approach, increasingly common internationally, focuses more directly on the expected outcomes of learning. Its proponents argue that learning is shaped by much more than individual subjects and syllabuses, and that fulfillment of the purposes of the curriculum requires approaches which are more directly relevant to emerging personal, social and economic needs. In this approach, the curriculum is often framed in terms of the key skills, capacities or competences that will be developed in children and young people.

A 'subject against skill/competence' debate creates unhelpful polarisation. The curriculum, learning and teaching need to enthuse children and young people about learning in ways that include both the vital contribution of discipline-based learning and the knowledge, skills and dispositions that will help them to meet the needs of today and the challenges of tomorrow.

In addition, learning is crucially affected by how progress and outcomes are assessed and how the results of such assessments are used. Assessment is a vital and integral part of learning and teaching and so needs to be fundamentally linked to the curriculum. Where assessment becomes dominated by accountability processes, as can happen, the consequences for children and young people's learning can be damaging.

The definition of curriculum used in this Review takes account of all of these factors.

Recommendation

1. **The school curriculum in Wales should be defined as including all of the learning experiences and assessment activities planned in pursuit of agreed purposes of education.**

What are the main influences on the curriculum?

The content of the school curriculum in any country is subject to many competing influences. On the one hand, assumptions and practices about what the fundamentals of good education should be can become so established over time that they form an almost unchallengeable bedrock of belief. Society – and especially parents and carers – often expects to recognise what children are doing at school in terms of their own past experiences. They may worry that any differences represent experiments that may risk children's futures. The structure of the teaching profession (with generalist primary teachers and specialist subject teachers in secondary schools, for example) also influences how the curriculum, and the school system itself, is organised. The infrastructures that emerge to support education are inevitably geared towards ensuring that current expectations are met, and so may perpetuate those expectations. A number of powerful tendencies can therefore inhibit curriculum renewal. Such tendencies not only influence the curriculum but can also shape what people see as possible and desirable in curriculum reform.

On the other hand, the curriculum is continuously subject to pressures to change, and the specific form that the curriculum takes will change over time in response to circumstances. Some changes may occur in light of developments in educational theory, psychology and, more recently, neuroscience. More often, they are a response to developing social, political and economic circumstances and are given added impetus by international measures of performance. Such pressures can drive the curriculum in different directions, for example by adding

fresh content and dimensions such as key skills as a response to the perceived needs of the moment. They can also lead to an unproductive concentration on those aspects where performance is measured and reported comparatively and publicly. These changes can then be carried forward, whether or not they remain relevant, as additions to the more 'fundamental' aspects of the curriculum.

External forces have become more acute in recent years, reflecting the impact on countries, societies and individuals of globalisation, technological innovation and long-term social trends. The demand for young people with improved levels of literacy, numeracy and wider skills, including critical thinking, creativity and problem solving, has fuelled an international trend towards curricula that give greater emphasis to the development of skills, alongside, or embedded in, a traditional subject or 'area of learning' approach. Changes in response to such pressures can even challenge hitherto accepted purposes of schooling itself as, for example, where economic pressures narrow what is taught to the reduction or even exclusion of the humanities or the arts. There is a constant tension between preserving and building on the foundations of the past and responding to the perceived needs and economic pressures of the moment.

The needs of employers and the workplace are also seen as vital if young people are to move smoothly and successfully into employment. In particular, concerns about the scientific, technological, engineering and mathematical (STEM) competences of the future workforce have influenced the relative priority given to these subjects. The pervasive impact of developments in technology vividly illustrates the way in which the context for the work of our schools is constantly evolving. Our children and young people already inhabit a digital

world and their personal, social and educational lives are increasingly intertwined with technology in various, rapidly changing forms. Full participation in modern society and the workplace already demands increasingly high levels of digital competence and that process can only continue into a future that we cannot imagine. As Tyler Cowen puts it in his book *Average is Over*, 'It might be called the age of genius machines, and it will be the people that work with them that will rise...we (will have) produced two nations, a fantastically successful nation, working in the technologically dynamic sectors, and everyone else. Average is over'[1]. Children and young people need to learn how to be more than consumers of technology and to develop the knowledge and skills required to use that technology creatively as learners and future members of a technologically competent workforce.

A reluctance to let go of aspects in the curriculum that are of limited relevance while at the same time adding fresh expectations can place schools and teachers under increasing pressure. To try to help teachers and schools to cope, there can be a tendency to construct increasingly complicated design and planning tools that in turn can divert attention away from the needs of children and young people and the importance of high-quality teaching and learning in the classroom.

How has the school curriculum in Wales developed?

The curriculum in Welsh schools, in common with other parts of the United Kingdom, has reflected the prevailing orthodoxy of the time, from the professionally driven, child-centred philosophy of 'Plowden' in 1967[2] to the centrally led, subject-centred rationale of the national curriculum in 1988. The decision in 1988 to define the school curriculum in statute represented a radical departure from previous practice in the United Kingdom and reflected concern about the educational experience of children and young people across the country at that time. The absence of a clear and common understanding of an acceptable curriculum was seen as having led to unacceptable inconsistency. There were also worries about the potential impact of 'fashionable' educational theories on children's learning.

The national curriculum sought to establish an entitlement for all children and young people in state schools to an education that would include exposure to nationally specified knowledge and skills. It would: establish common educational aims across Wales; facilitate mobility between stages and schools; deliver an entitlement to a broad and balanced education for all children and young people; secure efficiency in resource development, including teacher training; and allow the performance of schools to be assessed and compared. Although not all of these potential benefits were realised in practice, they

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[1] Cowen, T (2013) *Average is Over: Powering America Beyond the Age of the Great Stagnation* Penguin Group

[2] Central Advisory Council for England (1967) *Children and their Primary Schools* HMSO

still represent valuable aims which need to be taken into account in any new curriculum and assessment arrangements.

The period since 1988 has been particularly pressurised as governments have responded to concerns about standards, particularly in literacy and numeracy. Expectations about what schools should be doing have grown inexorably while evidence about how to bring about improvement has remained elusive. There are important lessons to be learned from this experience.

The Welsh Government has consistently sought to respond to these pressures, as seen in curriculum changes in 2008, major reports and initiatives on school improvement, and the reform of qualifications that is currently under way. It also commissioned a series of 'Task and Finish' reports covering such issues as the place of the arts and culture, physical activity and sport, and ICT and computing in children and young people's learning, and the place of Welsh language and culture in the secondary curriculum. Most recently the publication of its improvement plan[3] and its commissioning of both this Review and Professor John Furlong's review into teacher education are further indications of the Welsh Government's determination to bring about improvement.

The principle of a common entitlement has been sustained in successive developments in education policy. These developments have included: the development of *Routes for Learning* (Welsh Government, 2006); the introduction of a Foundation Phase to replace the former Key Stage 1; the development of an inclusive statutory National Literacy and Numeracy Framework (LNF) in response to growing evidence of problems in these vital aspects of education; the development of a Welsh Baccalaureate Qualification (WBQ) at Key Stage 4 and beyond; and an increased emphasis on skills across the curriculum.

The case for change

The case for change rests partly on concerns about perceived shortcomings in the present curriculum and assessment arrangements. Despite the series of reforms and initiatives introduced by the Welsh Government, there are a number of issues, both practical and fundamental, with the current curriculum and assessment arrangements in Wales. Evidence from Programme for International Student Assessment (PISA) surveys, the relative performance of children and young people in Wales in national qualifications, and evaluations in Estyn reports all demonstrate that levels of achievement are not as high as they could and should be. An Organisation for Economic Cooperation and Development (OECD) report published in 2014[4] highlighted the continuing high proportion of young people in Welsh schools whose performance was low and concluded that current assessment and evaluation arrangements are unsatisfactory. Concerns

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[3] Welsh Government (2014) *Qualified for life: An education improvement plan for 3 to 19-year-olds in Wales* Welsh Government

[4] OECD (2014) *Improving Schools in Wales: An OECD Perspective* OECD Paris

have been expressed about continuity in primary education and at points of transfer between stages. There is also a strong perception that personal, social and health education and the educational experience of young people at Key Stage 3 require radical improvement.

International surveys such as the OECD's PISA highlight differences in performance between countries leading to worries in some countries about loss of global competitiveness if their education systems are seen to be weak. The disappointing performance of Wales in successive PISA surveys has been and remains a significant driver for change.

A further significant challenge is that disadvantage in its many forms too often has a pernicious effect on the educational achievement and personal well-being of children and young people. It is essential that the curriculum is designed in ways that will engage the interest of all children and young people and enable them to achieve. A curriculum that promotes high expectations for all can help schools to defeat the circumstances that condemn so many to educational underachievement.

The high degree of prescription and detail in the national curriculum, allied to increasingly powerful accountability mechanisms, has tended to create a culture within which the creative role of the school has become diminished and the professional contribution of the workforce underdeveloped. The extent of legislative control and associated accountability mechanisms, seen as necessary at the time, have inhibited professionalism, agility and responsiveness in dealing with emerging issues, and have forced too-frequent political intervention in non-strategic matters. For many teachers and schools the key task has become to implement external expectations faithfully, with a consequent diminution of local creativity and responsiveness to the needs of children and young people. Partly as a consequence, much of the curriculum as experienced by children and young people has become detached from its avowed aims and too focused on the short-term. At its most extreme, the mission of primary schools can almost be reduced to the teaching of literacy and numeracy and of secondary schools to preparation for qualifications.

Existing shortcomings point to the need for improvements to current arrangements but the case for change is much more fundamental. The essential features of a curriculum devised in 1988 reflect a world that was yet to see the World Wide Web and the advances in technology and globalisation that have transformed the way we live and work. These changes have profound implications for what, and how, children and young people need to learn during the period of their statutory education.

The curriculum, then, has become overloaded, complicated and, in parts, outdated. Assessment arrangements are not making the contribution they should to improving learning. The ability of schools and teachers to respond to rapidly changing needs is constrained. As the Confederation of British Industry (CBI) said in its recent proposals for education, 'Systemic change is needed to align the curriculum, examinations and accountability framework with the outcomes we are looking for'[5]. Together, the current national curriculum and assessment arrangements no longer meet the needs of the children and young people of Wales. The case for fundamental change is powerful.

The task of the Review

The current Review of Curriculum and Assessment Arrangements took place against this backdrop. In recognition of the potential pitfalls of overload, complexity, and redundancy in the curriculum described above, the Review was asked to stand back and to take a fundamental look at the ways in which today's schools can prepare young people for an exciting but uncertain future. The Review's terms of reference are available at www.wales.gov.uk/topics/educationandskills/schoolshome/curriculuminwales/curriculum-for-wales/terms-of-reference/?lang=en.

To carry out its responsibilities, the Review has sought to identify clearly:

- the aspirations of the people of Wales for their schools
- the principles which should govern the design of the curriculum
- the purposes of the curriculum
- the way the curriculum can best be organised and described to meet those purposes and principles
- the implications for teaching and learning of proposals for change
- the role of assessment in both helping to achieve the purposes of the curriculum and in determining how far the purposes are being met
- the implications for teacher capacity, systems of accountability and other drivers of educational quality
- the ways in which the proposals arising from the Review might best be implemented, including the balance to be struck between national and local decision making.

The conclusions and recommendations of the Review are designed to provide a compelling case for a successful future for school education in Wales. The next chapter outlines how the Review formulated these recommendations through an extensive programme of engagement and evidence gathering and subsequent testing and refining of emerging proposals.

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[5] CBI (2014) *Step Change – A New Approach for Schools in Wales* CBI

Chapter 2: The Review – Processes and Evidence

In undertaking this Review, our commitment from the outset was to involve as many people in Wales in the process as possible. Between March and December 2014, members of the Review Team undertook to meet a very broad range of stakeholders, visiting around 60 schools, including Welsh- and English-medium nursery, primary and secondary schools, special schools, pupil referral units, a young offenders' institution and work-based learning settings. We met not only with headteachers, managers and their staff but also with children and young people, and where possible their parents and carers. We met representatives of the further education sector and universities. Groups of practitioners from a range of schools across Wales also attended a number of seminars where we tested and developed thinking. These meetings provided a rich source of evidence that has had a profound effect on the thinking of the Review.

The Review also engaged on an individual basis with a wide range of representative organisations from across Wales who made very important contributions to our evidence from their different perspectives, including those of employers. These organisations are listed on the Review's website.

The Review undertook a national call for evidence, encouraging stakeholders from across Wales to submit their views and help shape the outcome of the Review. In order to generate debate and discussion, the questions included in the call for evidence were deliberately very broad and open-ended and included questions such as 'What are the three best things about education in Wales?'. We were delighted that we received over 700 responses to the call, of which over 300 were from children and young people themselves. In order to do justice to the diverse nature of the responses, we appointed WISERD to analyse the responses[6].

As well as undertaking its own research, the Review also had recourse to a wealth of other evidence within Wales, including Estyn reports, Welsh Government policy documents (in some cases with associated evaluation reports) and, importantly, the reports of a number of independent reviews commissioned by the Welsh Government including:

- the ICT Steering Group's report to the Welsh Government
- the Review of Welsh second language at Key Stages 3 and 4
- the final report of the Cwricwlwm Cymreig, history and the story of Wales review group
- the report of the Schools and Physical Activity Task and Finish Group

[6] Wales Institute of Social and Economic Research, Data and Methods (WISERD) (2015) *Successful Futures: Analysis of questionnaire responses – Final Report* Welsh Government

- the report on Arts in Education in the Schools of Wales
- the report *Culture and Poverty: Harnessing the power of the arts, culture and heritage to promote social justice in Wales*
- the Review of Qualifications for 14 to 19-year-olds in Wales.

Principles of curriculum design

In moving from the evidence-gathering stage of the Review to the formulation of proposals for the curriculum and assessment, we developed a set of principles for curriculum design as follows.

Principles of curriculum design – the curriculum should be:

- **authentic**: rooted in Welsh values and culture and aligned with an agreed set of stated purposes
- **evidence-based**: drawing on the best of existing practice within Wales and from elsewhere, and on sound research
- **responsive**: relevant to the needs of today (individual, local and national) but also equipping all young people with the knowledge, skills and dispositions for future challenges as lifelong learners
- **inclusive**: easily understood by all, encompassing an entitlement to high-quality education for every child and young person and taking account of their views in the context of the United Nations Convention on the Rights of the Child (UNCRC), and those of parents, carers and wider society
- **ambitious**: embodying high expectations and setting no artificial limits on achievement and challenge for each individual child and young person
- **empowering**: developing competences which will allow young people to engage confidently with the challenges of their future lives
- **unified**: enabling continuity and flow with components which combine and build progressively
- **engaging**: encouraging enjoyment from learning and satisfaction in mastering challenging subject matter
- **based on subsidiarity**: commanding the confidence of all, while encouraging appropriate ownership and decision making by those closest to the teaching and learning process
- **manageable**: recognising the implications for and supported by appropriate assessment and accountability arrangements.

These principles have been used both to evaluate current practice and to guide and test the proposals for the future.

What does the evidence from Wales tell us?

A number of recurring themes emerge from all the evidence gathered from across Wales. It has been important to take these themes into account while developing the proposals.

The evidence from our discussions with stakeholders would suggest continuing support for the Foundation Phase, the LNF, *Routes for Learning*, the new WBQ at Key Stage 4 and beyond, and the introduction of wider skills across the curriculum. There is also a firm commitment to the Welsh language and bilingualism, to the principle of comprehensive, inclusive education, and to the inclusion of a Welsh dimension in the education of all children and young people. These positive views are reinforced by the responses to the call for evidence in which the most frequently mentioned 'best things' about education in Wales are reported as being 'the Foundation Phase, the Welsh language and bilingualism [particularly among younger respondents] and the focus on Welsh identity and the Curriculum Cymreig'[7].

Discussions with stakeholders suggest strongly that there is a real desire among the profession for schools and teachers to have more (but not complete) autonomy to make their own decisions within a national curriculum framework. Interestingly, in their responses to the call for evidence, the overwhelming majority of children and young people indicated that they 'do not think it matters if you study different things from your friends at school'[8].

For many teachers and schools, the key task has become to implement the prescribed external expectations for the curriculum and accountability faithfully, with a consequent diminution of both local creativity and responsiveness to the individual needs of children and young people. Perhaps unsurprisingly in the light of this, there would also appear to be significant support for a change in the way the curriculum is organised, with many favouring a shift away from a subject-based curriculum to an areas of learning approach or to the organising of learning around skills and/or themes. It was felt that this would help introduce a degree of continuity in primary education and at points of transfer between stages of education that was currently lacking.

A recurring concern of the children and young people who spoke to the Review Team was their perception that the current school curriculum was out of date in relation to digital technology. They talked about laboured teaching of software packages that they saw as being either simple to use intuitively or already out of date. Representatives of business were similarly extremely concerned that schools were out of touch with the emerging digital workplace. They saw the ability to use technology creatively for researching and problem solving as key competences that they wanted to see in prospective employees.

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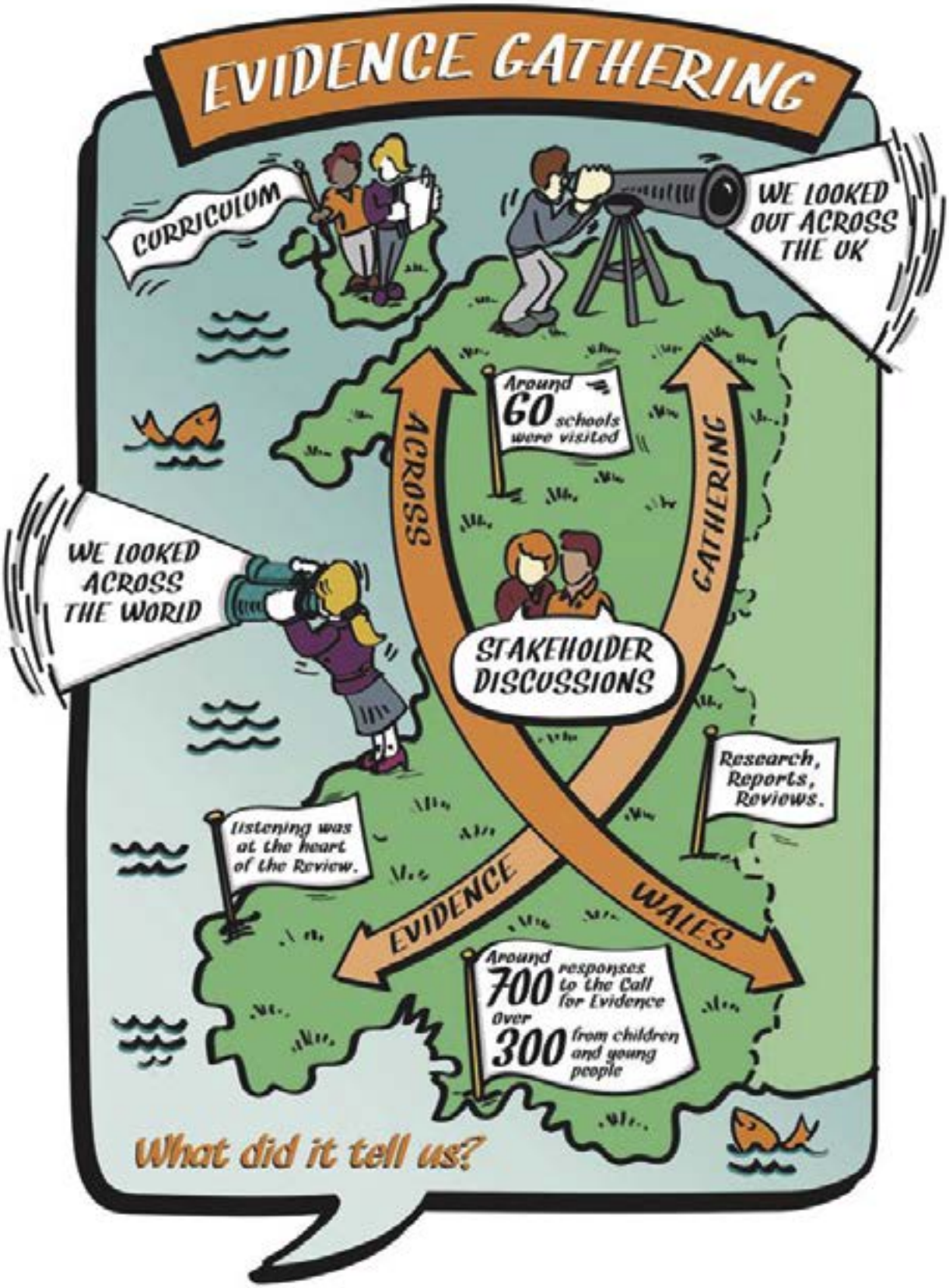
[7] Wales Institute of Social and Economic Research, Data and Methods (WISERD) (2015) *Successful Futures: Analysis of questionnaire responses – Final Report* Welsh Government

[8] ibid. WISERD (2015)


EVIDENCE GATHERING
CURRICULUM
WE LOOKED OUT ACROSS THE UK
Around 60 schools were visited
ACROSS
GATHERING
WE LOOKED ACROSS THE WORLD
STAKEHOLDER DISCUSSIONS
Research, Reports, Reviews.
Listening was at the heart of the Review.
EVIDENCE
WALES
Around 700 responses to the Call for Evidence
Over 300 from children and young people
What did it tell us?

In addition children and young people in particular, but not exclusively, would like to see a greater focus on general social competences (life skills and personal confidence, personal and social education (PSE)), basic skills (i.e. literacy and numeracy), more vocational education and careers guidance. The WISERD report suggests that these views were also reflected in responses to the call for evidence. As their analysis states, stakeholders felt that '...schools should be doing more than simply imparting knowledge. While successful learning was a highly valued outcome of education by all stakeholders (including children and young people), so too were a range of other outcomes. General social competences, life skills and personal confidence were seen by all as important things to be gained from school'[9]. Children and young people want lessons to be more relevant and engaging, with more practical lessons, more fun, more interactivity, and more out-of-classroom activities. There is a sense that a more general enthusiasm for learning has been sacrificed in the race for qualifications.

The other key message which it is worth highlighting here is an overwhelming sense that the current approach to assessment, qualification and performance management needs to change. This was mentioned in almost one-third of responses to the call for evidence and was a recurring theme throughout our meetings with stakeholders.

Many of these findings are reflected in the recent OECD report, *Improving Schools in Wales: An OECD Perspective* (2014). The report identifies four priority areas for Welsh Government to address, all of which are relevant, to a greater or lesser degree, to this Review.

- Ensuring that schools meet the learning needs of all their students.
- Building professional capital and collective responsibility throughout the system.
- Developing a coherent assessment and evaluation framework to promote improvement.
- Defining a long-term education strategy that builds on a select number of core priorities, is adequately designed and resourced and has appropriate governance and support structures.

What does the wider evidence tell us?

The Review also drew on a range of wider United Kingdom and international evidence in the form of discussions, visits, research papers and policy documents, among other things. It is clear that there is no single, universal template for a 'good' curriculum – much depends on local and national conditions, values and culture. In other words a successful curriculum must be 'authentic'. While the international evidence cannot therefore provide us with a curriculum model, it does offer useful insights into the international landscape.

- International policy development is often heavily influenced by PISA and other international surveys.

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[9] Wales Institute of Social and Economic Research, Data and Methods (WISERD) (2015) *Successful Futures: Analysis of questionnaire responses – Final Report* Welsh Government

- A statutory national curriculum is commonly used to promote consistency and entitlement but the extent to which the detail is defined in statute varies widely.
- The principle of subsidiarity is common but not universal. There would appear to be a trend towards the specification of national goals and encouragement of greater local decision making, in recognition of the limitations of compliance-based approaches.
- Literacy and numeracy are universally acknowledged to be the essential foundations of education.
- While breadth and balance are widely valued, there is a trend towards developing a curriculum that is more than a specified range of subjects or courses.
- There are significant moves away from 'learning about' to 'learning to', with a growing skills focus and an emphasis on application and development of higher-order skills, particularly creativity (entrepreneurship) and digital literacy.
- Assessment is a recurring challenge, with issues around specification, validity, reliability and teacher competence.
- Mixed-mode assessment is another common feature, including the appropriate use of testing.
- There is increasing focus on the purpose and use of assessment, and in particular its critical role in relation to teaching and learning.
- There is evidence of a recognition of the need for system alignment, bringing improved synergies between curriculum, assessment and accountability arrangements.
- There is increasing recognition of the importance of building system and teacher capacity as integral to curriculum reform.

Key issues and challenges for the Review

Taken together, all of this evidence indicates that the existing curriculum arrangements in Wales have some very real strengths upon which we can build – not least the pedagogy underpinning the Foundation Phase and the commitment to Welsh language and culture. However, the need for change is also very clear if we are to develop a curriculum which supports and enables world-class teaching and learning in the twenty-first century. The evidence suggests that in developing the new curriculum a number of key issues and challenges must be addressed in relation to aims and purposes, structure, pedagogy and assessment. A futher recurrent theme is the need to establish an effective change strategy to take forward any recommendations arising from the Review. These themes are addressed in turn in the chapters which follow, together with the related evidence.

Chapter 3: Purposes of the Curriculum

This chapter explains why the Review proposes that there should be a straightforward, enduring statement of curriculum purposes for Wales. It analyses and discusses relevant findings, policies and priorities that should inform the development of those purposes and finally sets out the Review's four proposed purposes.

Statements of aims or purposes are the starting point for curriculum specifications in many countries. They typically relate to implications for the individual, for society and for the economy and set broad directions to guide subsequent decisions about structure and content.

In its recent review of school education in Wales[10], the OECD found that Wales lacked a convincing overall set of aims and purposes and recommended that the Welsh Government should 'develop a shared vision of the Welsh learner, reflecting the government's commitment to quality and equity'.

Why are clear and agreed statements of purposes important?

Such statements would:

- mobilise the education community around a common mission
- promote broad ownership of education and make the curriculum open to wide debate beyond the professional community
- provide clarity about aspirations for the children and young people of Wales
- emphasise the importance of longer-term outcomes for children and young people beyond specified knowledge, skills and understanding that a school is expected to deliver
- provide a consistent point of reference for curriculum development, promoting coherence, progression and flow in learning intentions
- establish a firm basis for determining priorities as pressures on the curriculum continue to build
- guard against narrowing of the curriculum in response to short-term pressures
- act as a consistent guide for the discriminating selection of content, experiences and pedagogy
- provide the basis of necessary agreement among national and local government, schools and teachers about the desired overall direction, while allowing freedom to determine how the intentions will be achieved
- promote the basis for focus and consistency in teacher professional development
- provide a broad focus for accountability and improvement.

[10] OECD (2014) *Improving Schools in Wales: An OECD Perspective* OECD Paris

It is worth noting that there can be pitfalls which can mean that broad aims or purposes may have a limited relationship to the curriculum framework itself. The Cambridge Primary Review cautions that '...attempts to define official aims for the education system as a whole have a poor track record...and, more often than not, have been added to policy to give it a cloak of consensus...'[11]. Aims can also be superseded by successive pragmatic decisions driven by political or logistical imperatives. In practice, then, the taught curriculum can become very different from the espoused curriculum. To avoid these pitfalls, statements of curriculum purpose need to be formulated carefully so that they have integrity, are clear and direct and become central to subsequent engagement and development; in that way they can shape the curriculum and suffuse practice. Common understanding of **why** we are doing what we are doing is a powerful starting point from which to determine **what** it is we need to do and **how** we are going to do it.

What are the current aims of the curriculum?

The Education Act 2002 expresses aims in the form of general requirements as follows.

'The curriculum for a maintained school or maintained nursery school satisfies the requirements of this section if it is a balanced and broadly based curriculum which —

(a) promotes the spiritual, moral, cultural, mental and physical development of pupils at the school and of society, and

(b) prepares pupils at the school for the opportunities, responsibilities and experiences of later life.'

Although such requirements provide a very worthwhile but general guide to the aims of the curriculum, they are not expressed in a form that is likely to have a direct impact on teaching and learning.

How are curriculum purposes expressed elsewhere?

The NFER and Arad Research *A Rapid Evidence Assessment on the Impact of Curriculum and Assessment Arrangements within High Performing Countries*[12] notes that 'Although expressed differently in the policy documents of each of the high performing countries, there is a common, general aim to develop in their learners the necessary attitudes, values, skills and knowledge they need in order to achieve success and fulfilment as engaged thinkers and ethical citizens with an entrepreneurial spirit'.

There is a discernable shift from curriculum specifications based upon traditional subject disciplines towards the framing of purposes in terms of key competences, key skills, life skills, capabilities or capacities, for example in guidance from the European Union (EU), the United Nations Educational, Scientific and Cultural Organisation (UNESCO) and OECD. The agreement of the EU member states to endorse eight key competences encompassing citizenship, society, employment and personal effectiveness[13] has influenced changes to curriculum specifications in countries across Europe.

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[11] Cambridge Primary Review (2010) *Children, their World, their Education: Final Report and Recommendations of the Cambridge Primary Review* Routledge

[12] NFER and Arad Research (2013) *A Rapid Evidence Assessment on the Impact of Curriculum and Assessment Arrangements within High Performing Countries* Welsh Government

[13] European Commission (2011) *Assessment of Key Competences: Policy Handbook* European Commission Brussels

- The United States and Australia have developed curriculum frameworks that are based on key skills/key competences.
- In New Zealand, children and young people develop competency in thinking, using language, symbols and text, managing self, relating to others and participating and contributing.
- In Scotland, the curriculum aims to develop four capacities in young Scots: to become successful learners, confident individuals, responsible citizens and effective contributors.
- Curriculum statements generally take account of different aspects of a young person's development: as a well-rounded, personally effective individual and team member; as an ethical citizen and a member of an increasingly diverse society; as a member of the workforce and a creative contributor to the nation's economy; as a recipient of and contributor to national and international culture; and as a flexible, lifelong learner.
- There is a trend towards emphasising the ability to apply learning across subjects and a disposition to do so effectively.

The proposals in this Review take account of these trends and are designed to establish a firm and continuing relationship between defined purposes and learning and teaching processes.

Recommendation

2. **The school curriculum should be designed to help all children and young people to develop in relation to clear and agreed purposes. The purposes should be constructed so that they can directly influence decisions about curriculum, pedagogy and assessment.**

Developing distinctive purposes of the curriculum for Wales

The views gathered during the Review's extensive discussions with school leaders, teachers and other stakeholders help to begin to shape purposes for the curriculum in Wales. For example, responses to the question in the call for evidence 'What are the three best things about education in Wales?'[14] highlighted support for:

- the principles enshrined in the UNCRC
- an inclusive approach to education, including the commitment to the comprehensive school system
- the Welsh language and culture
- the community and civic role of schools in Wales' society
- the health and well-being of our children and young people.

The conclusions of the important set of reports of 'Task and Finish' groups commissioned by the Welsh Government also provide clear messages about their desired curriculum purposes. In particular:

- the recommendation in the ICT Steering Group's report to the Welsh Government that digital literacy, or digital competence, is as important in the twenty-first century as literacy and numeracy
- the independent Review of Welsh second language at Key Stages 3 and 4 which argues that 'The future of Welsh and Welsh culture is wholly dependent on transmitting the language to our young people'
- the final report of the Cwricwlwm Cymreig, history and the story of Wales review group which states that 'The next national curriculum for Wales should take as its starting point the ideas and ideals embodied in the current Cwricwlwm Cymreig and build upon these as the foundation of the next National Curriculum for Wales rather than as an addition to it. It should have a Welsh dimension and an international perspective'
- the report of the Schools and Physical Activity Task and Finish Group which includes the recommendation that the Welsh Government should give PE the status of a 'core' subject in order to address '...the pivotal and deep-seated concerns around levels of physical activity and the health of our young people in Wales'
- the Arts in Education in the Schools of Wales Review's recommendations which made the case that the Welsh Government should 'enhance the current curriculum to include creativity, alongside numeracy and literacy as a core theme across all the subject disciplines and in both primary and secondary education; further, the Welsh Government should consider an arts rich education to be core to the whole school experience of all pupils'

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[14] Wales Institute of Social and Economic Research, Data and Methods (WISERD) (2015) *Successful Futures: Analysis of questionnaire responses – Final Report* Welsh Government

- the recognition in the independent report *Culture and Poverty: Harnessing the power of the arts, culture and heritage to promote social justice in Wales* (Welsh Government, 2014) on the impact the arts and culture can have in promoting social justice in Wales.

Contributors to the call for evidence also offered a range of views in relation to the purposes of the curriculum. The researchers decided to group these under five headings, as follows.

- Successful learners: responses referring to the cognitive outcomes of education and attitudes towards learning and knowledge.
- Confident individuals: responses referring to aspects of personal efficacy and self-assurance.
- Responsible citizens: responses relating to the need for education to instil a sense of social responsibility.
- Competent adults: responses covering 'life-skills'.
- Healthy minds and bodies: responses relating to the need for schools to foster mental and physical well-being.

Children and young people's responses emphasised the social significance of going to school. The single words mentioned most frequently were 'knowledge' and 'friendship'. There was also frequent reference to various skills, including working with others, communication and independence, as well as some reference to specific subjects including Welsh, ICT, mathematics and physical education (PE).

Many of these themes are reflected in key Welsh Government policy documents and statements, which provide an important foundation for the identification of purposes of the curriculum in Wales. The Welsh Government's education improvement plan, *Qualified for life*[15], was published while the Review was underway. The plan includes a section entitled 'Improving education the Welsh way'. It provides six principles and values intended to be a guide for building on Wales' 'long history and tradition of valuing education'.

1. Confidence and pride in Wales as a bilingual nation with the strength and assurance to nurture both languages.
2. Learners are at the heart of all we do.
3. Every child and young person benefits from personalised learning.
4. The success of our education system depends upon the success of all children. Collective responsibility, supported by cooperative values of partnership, trust, mutual respect and support underpin how we work together.
5. Developing the capacity for a self-improving system.
6. Celebrate success, recognise excellence, and share both.

Indications about desired purposes are reflected in other Welsh Government policy statements. These include:

- the *Welsh-medium Education Strategy* (Welsh Government, 2010)[16], which sets out Welsh Government's ambition for 'a country where Welsh-medium education and training are integral parts of the education infrastructure. We want to ensure that our education system makes it possible for more learners of all ages to acquire a wider range of language skills in Welsh. This will enable them to use the language in their personal lives, socially and in the workplace. We want to see a system which is responsive to public demand for an increase in Welsh-medium provision'
- the Welsh Language Strategy, *A living language: a language for living* (2012)[17]. The strategy sets out a plan for increasing the number of people who both speak and use the language
- the Welsh Government's commitment to the UNCRC in 2004, adopted as the basis of all Welsh Government policy making for children and young people, articulated through the seven core aims. These state that all children and young people:
    1. have a flying start in life
    2. have a comprehensive range of education and learning opportunities

[15] Welsh Government (2014) *Qualified for life: An education improvement plan for 3 to 19-year-olds in Wales* Welsh Government

[16] Welsh Government (2010) *Welsh-medium Education Strategy* Welsh Government

[17] Welsh Government (2012) *A living language: a language for living – Welsh Language Strategy 2012–17* Welsh Government

3. enjoy the best possible health and are free from abuse, victimisation and exploitation
4. have access to play, leisure, sporting and cultural activities
5. are listened to, treated with respect, and have their race and cultural identity recognised
6. have a safe home and a community which supports physical and emotional well-being
7. are not disadvantaged by poverty.

The Rights of Children and Young Persons (Wales) Measure (2011) places a duty on all Welsh Ministers to have due regard to the substantive rights and obligations within the UNCRC. This came into force in May 2012.

Other relevant Welsh Government strategies include:

- its economic development strategy, which recognises the key role education has to play in a system that 'gives people the knowledge, skills and confidence they need by the time they reach the statutory school leaving-age, and provides high-quality education and training for employment'[18]
- its inaugural All Wales Healthy Child Programme (WHCP), currently under development, which will set out an intention to support families to enable their children to attain their full health and developmental potential
- its commitment to ensuring that the school setting is a healthy setting, where children and young people's education can be supported by a holistic approach to health and well-being.

In addition, the Well-being of Future Generations (Wales) Bill, which is at Stage 1 of the legislative process at the time of drafting this report, identifies a set of goals which express a shared vision of the long-term economic, environmental and social well-being of Wales. The goals are for a Wales that is prosperous, resilient, healthier, and more equal, with cohesive communities, a vibrant culture and a thriving Welsh language.

Our principles of curriculum design also require that the proposals are authentic and reflect Wales' own particular values and culture.

There is a degree of complexity to be resolved here, and part of the job of the Review was to try to render that complexity manageable. The following summary of the issues to be addressed in the purposes therefore takes account of Wales' economic, environmental and social values and aspirations as well as key policies and strategies and the views gathered during the Review.

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[18] Welsh Government (2010) *Economic Renewal: a new direction* Welsh Government

Summary of the themes to be addressed in the purposes

The evidence considered by the Review reinforces the need for common purposes that apply to all children and young people and promote high aspirations and a determination to achieve. Young people should all leave school having experienced a broad education that equips them to thrive in an increasingly complex and rapidly changing world.

Our children and young people need to be rooted in their own cultures and to have a strong sense of identity as citizens of Wales, the United Kingdom, Europe and the wider world. Engaged citizenship requires the kind of understanding of democracy, human rights, interdependence, sustainability and social justice that should inform their personal views and sense of commitment. Children and young people need an ability to deal with difficult and contested ethical issues such as those that can arise from developments in science and digital technologies. Active citizenship requires the confidence and resilience that underpin the ability to exert influence and participate in vigorous debate. That confidence should be built on a strong base of knowledge and respect for evidence.

The evidence also highlights the need for our young people to be ready to learn throughout their lives, leaving school with a sound command of literacy and numeracy skills, and both competent and confident in their use of technology. They should have confidence in engaging with intellectual challenge and be ready to build on what they have learned. Creativity and enterprise are central features of modern life that should be developed and extended throughout a school career. Young people's experience at school should have stimulated their imaginations in ways that engender excitement, are personally fulfilling and foster creative thinking. In addition, they need to be ready to enter the adult world with the 'softer' skills, dispositions and attitudes that will be essential in their future lives, including the desire and the capacity to contribute, individually or as a member of a team.

A continuing theme in the evidence was the importance of well-being, and in particular mental health. Schools need to care both for children and young people's physical and emotional needs and help them to take responsibility for their own lives, understanding the importance of, for example, diet and fitness and being confident in managing their own affairs. Independence, self-reliance and respect for others should be fostered throughout the teaching and learning process.

Against this backdrop, we have sought to develop a vision of a well-educated young person completing their statutory education in Wales. As a result, the Review proposes the following four purposes of the curriculum. These are expressed in terms of what all children and young people should become and achieve through their school education.

Recommendation

3. **The purposes of the curriculum in Wales should be that children and young people develop as:**
   - **ambitious, capable learners, ready to learn throughout their lives**
   - **enterprising, creative contributors, ready to play a full part in life and work**
   - **ethical, informed citizens of Wales and the world**
   - **healthy, confident individuals, ready to lead fulfilling lives as valued members of society.**

The four purposes of the curriculum and the key characteristics

On the basis of the evidence and analysis of the Review, we further propose that the four purposes of the curriculum be elaborated in terms of their key characteristics that demonstrate the purpose through practice and should be developed through the curriculum.

All our children and young people will be:

- **ambitious, capable learners who:**
  - set themselves high standards and seek and enjoy challenge
  - are building up a body of knowledge and have the skills to connect and apply that knowledge in different contexts
  - are questioning and enjoy solving problems
  - can communicate effectively in different forms and settings, using both Welsh and English
  - can explain the ideas and concepts they are learning about
  - can use number effectively in different contexts
  - understand how to interpret data and apply mathematical concepts
  - use digital technologies creatively to communicate, find and analyse information
  - undertake research and evaluate critically what they find

  and **are ready to learn throughout their lives**

- **enterprising, creative contributors who:**
  - connect and apply their knowledge and skills to create ideas and products
  - think creatively to reframe and solve problems
  - identify and grasp opportunities
  - take measured risks
  - lead and play different roles in teams effectively and responsibly
  - express ideas and emotions through different media
  - give of their energy and skills so that other people will benefit

  and **are ready to play a full part in life and work**

- **ethical, informed citizens who:**
  - find, evaluate and use evidence in forming views
  - engage with contemporary issues based upon their knowledge and values
  - understand and exercise their human and democratic responsibilities and rights
  - understand and consider the impact of their actions when making choices and acting
  - are knowledgeable about their culture, community, society and the world, now and in the past
  - respect the needs and rights of others, as a member of a diverse society
  - show their commitment to the sustainability of the planet

  and **are ready to be citizens of Wales and the world**

- **healthy, confident individuals who:**
  - have secure values and are establishing their spiritual and ethical beliefs
  - are building their mental and emotional well-being by developing confidence, resilience and empathy
  - apply knowledge about the impact of diet and exercise on physical and mental health in their daily lives
  - know how to find the information and support to keep safe and well
  - take part in physical activity
  - take measured decisions about lifestyle and manage risk
  - have the confidence to participate in performance
  - form positive relationships based upon trust and mutual respect
  - face and overcome challenge
  - have the skills and knowledge to manage everyday life as independently as they can

  and **are ready to lead fulfilling lives as valued members of society.**

If these purposes secure general support from across Wales, they should guide all future decisions about national and local educational priorities and underpin all teaching and learning in Wales.

The next chapter considers how the curriculum might be structured in order to enable these purposes to be realised for each child and young person in every school.

All our children and young people will be...

ambitious, capable learners who:

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- are building up a body of knowledge and have the skills to connect and apply that knowledge in different contexts
- are questioning and enjoy solving problems
- can communicate effectively in different forms and settings, using both Welsh and English
- can explain the ideas and concepts they are learning about
- can use number effectively in different contexts
- understand how to interpret data and apply mathematical concepts
- use digital technologies creatively to communicate, find and analyse information
- undertake research and evaluate critically what they find

and **are ready to learn throughout their lives**.

healthy, confident individuals who:

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- express ideas and emotions through different media
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ethical, informed citizens who:

- find, evaluate and use evidence in forming views
- engage with contemporary issues based upon their knowledge and values
- understand and exercise their human and democratic responsibilities and rights
- understand and consider the impact of their actions when making choices and acting
- are knowledgeable about their culture, community, society and the world, now and in the past
- respect the needs and rights of others, as a member of a diverse society
- show their commitment to the sustainability of the planet

and **are ready to be citizens of Wales and the world**.

Chapter 4: Structure

We expect children and young people to learn a vast amount during their period of statutory education and they will be working across a very wide range of fronts at any one time. This chapter explores the important question of how future national expectations for what children and young people will learn should be structured so as to make it most likely that the identified curriculum purposes will be achieved.

The Review provides an opportunity to design a curriculum structure which supports the achievement of the four curriculum purposes, addresses the current complexity and other structural matters which currently hinder good teaching and learning, and builds on the best aspects of current structures. This chapter considers the history and form of the current structure and then sets out a proposed new structure for organising national expectations, firstly in terms of breadth and balance (for example across different subjects) and secondly in terms of the progress that we expect children and young people to make during the period of statutory education.

The national curriculum since 1988

Wales has arrived at its current curriculum and assessment arrangements through a series of reviews following the Education Reform Act 1988 (ERA) introduced by the then Government in Westminster. The ERA introduced the basic curriculum (which at the time consisted of the national curriculum and religious education (RE)) and focused on providing a legislative framework designed to ensure the quality of teaching and learning and consistency of opportunity and standards.

Since the Education Reform Act 1988 there have been three further curriculum reviews in Wales (not including the current review). The most recent review (2008) included a stronger emphasis on skills, cross-cutting themes, flexibility and future-proofing the curriculum to make it relevant to the twenty-first century.

The following table sets out current requirements with respect to curriculum provision in schools in Wales.

National Curriculum requirements for Wales: September 2014		
Foundation Phase		
National Literacy and Numeracy Framework (LNF)	Skills framework for 3 to 19-year-olds (non-statutory)	Seven Areas of Learning: – Personal and Social Development, Well-Being and Cultural Diversity – Language, Literacy and Communication Skills – Mathematical Development – Welsh Language Development (English-medium schools) – Knowledge and Understanding of the World – Physical Development – Creative Development and a framework for the basic curriculum (in maintained schools) for RE.
Key Stage 2		
National Literacy and Numeracy Framework (LNF)	Skills framework for 3 to 19-year-olds (non-statutory)	Programmes of study for: – English, Welsh, mathematics and science (core subjects) – Welsh second language (English-medium schools), design and technology, ICT, history, geography, art and design, music and PE (foundation subjects) and frameworks for the basic curriculum – PSE, RE, and sex education.
Key Stage 3		
National Literacy and Numeracy Framework (LNF)	Skills framework for 3 to 19-year-olds (non-statutory)	Programmes of study for: – English, Welsh, mathematics and science (core subjects) – Welsh second language (English-medium schools), design and technology, ICT, history, geography, art and design, music, PE and modern foreign languages (foundation subjects) and frameworks for the basic curriculum – PSE, RE, sex education and careers and the world of work.
14–19		
	Skills framework for 3 to 19-year-olds (non-statutory) other skills including WBQ	Programmes of study for: – English, Welsh, mathematics and science (core subjects) – PE and Welsh second language (English-medium schools) (foundation subjects) and the basic curriculum – PSE, RE, sex education, and careers and the world of work.

In October 2014, following an open consultation, the Welsh Government published revised Areas of Learning for Language, Literacy and Communication Skills and Mathematical Development, and programmes of study for Key Stages 2 to 4 for English, Welsh (first language) and mathematics. The programmes of study also align with the GCSE specification content for the new qualifications which will be delivered for the first time in September 2015.

The evidence collected during the course of the Review strongly suggests that, despite successive modifications, the philosophy, form and content of the current national curriculum require significant change. There was a recurring view that the curriculum had become unwieldy, overcrowded and atomistic, and that it was inhibiting opportunities to apply learning more holistically in 'real life' situations, or to use that learning creatively to address issues that cross subject boundaries. A curriculum defined largely in terms of discrete subjects can become directly translated into a timetable within which important cross-curricular learning can be marginalised. In addition, separate subject planning, combined with a narrow interpretation of how best to develop literacy and numeracy skills, was sometimes inadvertently resulting in a narrow and repetitive set of experiences.

Criteria for a curriculum structure for the future

Evidence gathered during the Review, together with our principles of curriculum design (see page 14), suggests that any proposed structure should satisfy a number of criteria.

The structure of the curriculum should:

- reflect directly and promote the curriculum purposes
- embody the entitlement of all children and young people, including those with severe, profound or multiple learning difficulties, to a high-quality, broad and appropriately balanced education throughout the period of statutory education
- promote progression in children and young people's learning
- encourage depth of learning and provide appropriate challenge in ways that will raise overall standards of achievement
- promote coherence and encourage children and young people to make connections across different aspects of their learning
- enable children and young people to apply in unfamiliar contexts what they have learned
- promote sustained attention to the development and application of knowledge and skills in literacy, numeracy and digital competence
- ensure appropriate emphasis on the Welsh language and culture

- encourage stimulating and engaging teaching and learning
- be as simple and straightforward as possible
- be understood by and have the confidence of parents, carers and teachers.

Structuring learning (1): the breadth of the curriculum

The first dimension we consider is breadth. What is needed is some way of making sense of the span of knowledge, skills, dispositions and experiences that collectively comprise the breadth of the curriculum by using a coherent and manageable number of organisers.

Some argue that subjects embody our cultural and educational inheritance as well as our accumulated wisdom and should therefore be used as the organisers. Others advocate an approach founded on the skills and competences that are thought to reflect more directly the requirements of modern life.

The 'subject against skill/competence' debate represents an unhelpful polarisation, since both make important contributions to fulfilling the purposes of the curriculum. The structure of the curriculum should therefore ensure that the vital contribution of disciplinary learning is preserved but is supplemented by other aspects that relate directly to the needs of today and provide sound preparation for the challenges of tomorrow. This is in line with findings of a report commissioned by Welsh Government in 2013 which concluded there 'is evidence, internationally, of a move towards more skills-based curricula that are focused on identifying and defining essential overarching competences alongside the more traditional subject-based curriculum content'[19].

There has been an international trend in recent years towards using 'areas of learning' as curriculum organisers, sometimes combining disciplinary learning and wider capabilities or capacities.

- Within the broad umbrella of the Melbourne Declaration on Educational Goals for Young People in 2008, the Australian national curriculum attempts to marry disciplinary learning with a 'global orientation' expressed in general capabilities and cross-curricular priorities. The structure reflects goals associated with well-being, culture, basic skills, ICT, employability and personal effectiveness and also makes direct reference to the importance of disciplinary knowledge with eight learning areas: English; mathematics; sciences; humanities and social sciences; arts; languages; health and physical education; ICT and design and technology.
- New Zealand also has eight areas: English; the arts; health and physical education; learning languages; mathematics and statistics; science; social sciences; and technology. In addition, it has specified key competencies in: thinking; using language, symbols and texts; managing self; relating to others; and participating and contributing.
- The Netherlands employs six broad areas: Dutch; English (at the top of primary school); arithmetic and mathematics; social and environmental

[19] NFER and Arad Research (2013) *A Rapid Evidence Assessment on the Impact of Curriculum and Assessment Arrangements within High Performing Countries* Welsh Government

- studies (geography, history, science, citizenship, social and life skills, healthy living, social structures, religious and ideological movements); creative expression (music, drawing and handicrafts); and sports and movement.
- Northern Ireland has six areas: the arts (art and design, music, drama); languages and literacy (talking, listening, reading, writing, drama); mathematics and numeracy; personal development (emotional development, learning to learn, health, relationships and sexual education) and mutual understanding (in the local and global community); physical development and movement; and the world around us (geography, history, science and technology). The strands within each area share curriculum objectives and teachers are expected to integrate learning across the areas. In addition to the learning areas, RE remains a compulsory subject. There are cross-curricular skills in communication, using mathematics and using ICT. There are also thinking skills and personal capabilities, which comprise a similar range of skills to the personal, learning and thinking skills in England's new secondary curriculum.
- Scotland has eight curriculum areas: expressive arts; health and well-being; languages; mathematics; religious and moral education; sciences; social studies; technologies. In addition literacy, numeracy and particular aspects of health and well-being and ICT are to be developed and reinforced across the curriculum.
- England retains subjects as the main curriculum building blocks. The national curriculum remains structured around 12 subjects, split into core and foundation, with associated programmes of study. Recommendations from independent reviews to move to a structure based on capacities[20] and areas of learning have been rejected by the government.
- The Foundation Phase in Wales includes seven Areas of Learning.

[20] QCA (2007) *Secondary curriculum review consultation: Draft summary of findings* QCA
Rose, J (2009) *Independent Review of the Primary Curriculum: Final Report* Department for Children, Schools and Families

Areas of Learning and Experience

Taking account of the evidence gathered in the course of the Review and the criteria identified earlier, the Review recommends that a single organising structure for the curriculum should apply for the entire age range from 3 to 16.

We propose that this structure should comprise 'Areas of Learning and Experience'. Each of the Areas of Learning and Experience should make distinct and strong contributions to developing the four purposes of the curriculum. Taken together, they should define the breadth of the curriculum. We have chosen the term 'Area of Learning and Experience' (originally used in a 1985 HMI Report[21] and subsequently by ACCAC[22]) rather than the narrower 'Area of Learning' currently used in the Foundation Phase. The intention is to signal the importance of educational experiences as an integral part of the curriculum, to broaden children and young people's horizons, stimulate their imaginations and promote enjoyment in learning. The education of children and young people should include rich experiences that are valuable in their own right.

The Review affirms that subjects and disciplines should remain important but that these should be grouped within six Areas of Learning and Experience. Each of these Areas of Learning and Experience should include, where appropriate, both a Welsh dimension and an international perspective in line with the recommendations of the independent review of the Cwricwlwm Cymreig, history and the story of Wales.

The Cambridge Primary Review[23] identifies characteristics that help to define such areas. These characteristics include their internal logic or integrity, the knowledge that should form the core and their relationship to educational aims. Similarly, each of the Areas of Learning and Experience advocated by this Review should:

- provide a rich context for achieving the purposes of the curriculum
- be internally coherent
- employ distinctive ways of thinking and have an identifiable core of disciplinary and instrumental knowledge.

Recommendation

4. **The curriculum 3–16 should be organised into Areas of Learning and Experience that establish the breadth of the curriculum. These areas should provide rich contexts for developing the four curriculum purposes, be internally coherent, employ distinctive ways of thinking, and have an identifiable core of disciplinary or instrumental knowledge.**

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[21] HMI (1985) *The Curriculum from 5–16* HMSO

[22] Qualifications, Curriculum and Assessment Authority for Wales (ACCAC) (1996) *Desirable Outcomes for Children's Learning before Compulsory School Age* ACCAC

[23] Cambridge Primary Review (2010) *Children, their World, their Education: Final Report and Recommendations of the Cambridge Primary Review* Routledge

The Review proposes six Areas of Learning and Experience, as follows:

- **Expressive arts**
- **Health and well-being**
- **Humanities**
- **Languages, literacy and communication**
- **Mathematics and numeracy**
- **Science and technology.**

Recommendation

5. **The new national curriculum in Wales should have six Areas of Learning and Experience: Expressive arts; Health and well-being; Humanities; Languages, literacy and communication; Mathematics and numeracy; and Science and technology.**

The Areas of Learning and Experience should not be seen as watertight compartments but rather a means of organising the intentions for each child and young person's learning, with decisions and plans for how these should translate into day-to-day activities taking place creatively at school level. They are therefore not timetabling devices.

Having common Areas of Learning and Experience from 3 to 16 should promote and underpin continuity and progression and help to make the structure easier to understand. The approach should help to ensure breadth and encourage appropriate decisions about 'balance' across a child or young person's learning at any time, for example by removing distinctions between 'core' and 'foundation' subjects.

Individual teachers, including specialist teachers in secondary schools, will draw upon the different Areas of Learning and Experience in their planning. This should help to address concerns about compartmentalisation by encouraging teachers to work creatively, and collaboratively, across subject boundaries in the context of the four curriculum purposes. Teachers should be able to help children and young people to make links across learning, bringing together different aspects to address important issues relating, for example, to citizenship, enterprise, financial capability and sustainability.

Cross-curriculum Responsibilities: literacy, numeracy and digital competence

There is a range of competences and skills which are foundations for almost all learning and are essential to being able to participate successfully and confidently in the modern world. Priority has already been given to literacy and numeracy

within the Welsh curriculum through the LNF, including Routes to literacy and Routes to numeracy. In addition, the recommendations in the ICT Steering Group's report to the Welsh Government[24] and the findings of the Review point clearly to the conclusion that digital competence is increasingly fundamental to learning and life and that it should have similar status within the curriculum to that of literacy and numeracy.

The Review therefore recommends that literacy, numeracy and digital competence should be Cross-curriculum Responsibilities for all teachers and people who work with children and young people. The curriculum structure needs to ensure that children and young people develop high levels of competence in these aspects and have frequent opportunities to develop, extend and apply them across the curriculum.

Competence in literacy, including competence in the spoken word, syntax and spelling, is essential for learning across the curriculum, not least because of the fundamental role of language in thinking. The key to developing command of these skills lies not in repetition and drill for significant periods of time during the school day but in a sound understanding of their essential components supported by developmentally appropriate teaching and learning and rich contexts within which they can be reinforced, extended and applied. Without this, as one contributor remarked, 'There is a real danger that we are teaching the mechanics of writing but giving the children nothing to write about'. Children and young people also need every opportunity to explain thinking, explore and discuss ideas and use language skills at an appropriate level. The literacy component of the LNF provides guidance about a common approach to the reinforcement of such skills at different developmental stages.

Similarly, numeracy, including arithmetical and data-handling skills, is deployed widely across the curriculum, and competence in numeracy is essential for independent living and work. Children and young people need regular opportunities to deepen their understanding of number and, as with literacy, to reinforce and use their numeracy skills in different contexts. It is important that all teachers and other staff who work with children and young people have an understanding of how best to reinforce these skills and take opportunities to consolidate learning appropriately. The numeracy component of the LNF provides guidance about a common approach to the reinforcement of such skills at different developmental stages.

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[24] Arthur, S, Crick, T, Hayward, J (2013) *The ICT Steering Group's Report to the Welsh Government*

Digital competence plays an increasingly powerful role in the lives of children and young people, for communication, networking, information, leisure and entertainment as well as for an increasing range of transactions and educational applications. The ability to use digital technology skills creatively is an increasingly common feature of the modern workplace, for example for developing simulated models that test out ideas safely and inexpensively or when using complex medical equipment that needs to be reprogrammed to match the patient's individual needs. As recommended by the ICT Steering Group, the competences 'should not primarily be predicated on rapidly changing technologies, but should focus on pedagogy, deeper skill development, transferability, and understanding, as well as potential application of these competencies'. All teachers and other staff should have responsibility to support the development of digital competences, and the skills and knowledge to do this.

For the future, the expectations for progression from 3 to 16 in literacy and numeracy would build on the work that has been done in Wales to embed these skills at the heart of, and importantly across, the Welsh education system. In terms of the structure of the curriculum, the expectations for literacy and numeracy would form part of, and be highlighted mainly within, the Languages, literacy and communication, and Mathematics and numeracy Areas of Learning and Experience respectively. Expectations about progression in these aspects would be based upon the existing LNF and the recently developed Areas of Learning for Language, Literacy and Communication Skills and for Mathematical Development, as well as the programmes of study for English, Welsh (first language) and mathematics. There would be references within the other Areas of Learning and Experience to particularly fruitful opportunities for the development of literacy and numeracy.

As part of the development flowing from the Review a digital competence progression framework and an accompanying 'Routes to Learning Digital Competence' would need to be developed, taking account of the recommendations of the ICT report. Different aspects would be included and highlighted within the most relevant Areas of Learning and Experience, for example within Languages, literacy and communication for aspects relating to language and communication, and Science and technology for scientific interfacing, data handling and process design.

Schools should identify a member of staff who would lead and support each of the three Cross-curriculum Responsibilities.

Recommendations

6. **Children and young people should have their learning developed across the curriculum through three Cross-curriculum Responsibilities that should be the responsibility of all teachers: literacy; numeracy; and digital competence.**
7. **A digital competence framework and an accompanying 'Routes to Learning Digital Competence' should be developed and be included as a Cross-curriculum Responsibility.**

Wider skills

The Welsh Government, in common with other countries across the world, has recognised the importance of ensuring that children and young people develop a range of 'wider skills' thought necessary for modern life and work. It has taken steps to ensure that children and young people develop these wider skills and become more resilient and better able to deal with the changing challenges that face individuals now and in the future. A NFER/Arad report cites Parsons and Beauchamps (2012)[25] who conclude that most high-performing countries highlight problem solving, creative and critical thinking, selecting information, applying knowledge and drawing conclusions as the most prevalent skills identified.

The 2008 curriculum review in Wales led to the introduction of a non-statutory *Skills framework for 3 to 19-year-olds in Wales*, whereas in Phase 1 of the curriculum and assessment arrangements review it was suggested that 'wider skills should be developed across all four phases/stages of education, including Key Stage 4, providing clear routes for skills progression from Foundation Phase through to the Welsh Baccalaureate Qualification (WBQ)'[26].

The 'wider skills' in Wales comprise[27]:

- critical thinking and problem solving – marshalling critical and logical processes to analyse and understand situations and develop responses and solutions
- planning and organising – implementing solutions and executing ideas and monitoring and reflecting on results
- creativity and innovation – generating ideas, openness and courage to explore ideas and express opinions
- personal effectiveness – reflecting on and understanding oneself and others, behaving in effective and appropriate ways; being an effective learner.

The new Welsh Baccalaureate model recognises the key roles which these skills have to play, particularly from an employment perspective, but there is a strong

[25] NFER and Arad Research (2013) *A Rapid Evidence Assessment on the Impact of Curriculum and Assessment Arrangements within High Performing Countries* Welsh Government

[26] Welsh Government (2013) *Curriculum for Wales – Consultation on proposals for revised curriculum and assessment arrangements for Wales Phase 1: Literacy, numeracy and wider skills* Welsh Government

[27] The list of wider skills also includes 'digital literacy', but this is now included in the proposed digital competence Cross-curriculum Responsibility.

argument that they should be introduced at the beginning of a child's education and developed throughout their time in school, rather than appearing when a young person is in Year 10. The Review proposes that wider skills should be addressed from the start of schooling in ways that recognise how children learn and develop.

As indicated in the previous section, the Review proposes that digital competence should be one of the three Cross-curriculum Responsibilities. The Review proposes that the other four wider skills should be embedded within each Area of Learning and Experience. Separate frameworks for these wider skills would introduce further complexity into the design of the curriculum, and that would replicate some of the concerns about the current situation. Schools and teachers will be able to focus on devising suitable learning, teaching and assessment activities that reflect these wider skills.

Recommendation

8. **The expectations for the three Cross-curriculum Responsibilities and wider skills should be embedded within the Areas of Learning and Experience.**

The six Areas of Learning and Experience

The following section considers in more detail each of the six proposed Areas of Learning and Experience and the way in which they might be constructed. They are listed alphabetically to signal that they are of equal importance in a broad and balanced curriculum. In each case, we provide a rationale for the Area of Learning and Experience, outline its scope and offer a small number of illustrations of how the Area relates to the four curriculum purposes.

Rationale

Through the Expressive arts Area of Learning and Experience, schools and teachers can encourage children and young people to develop their creative appreciation and talent and their artistic and performance skills. The expressive arts provide opportunities to explore thinking, refine, and communicate ideas, engaging thinking, imagination and senses creatively. They also promote exploration of issues of personal and cultural identity. Engagement with the expressive arts requires application, perseverance and close attention to detail, capacities that have benefits across learning more widely. In the Arts in Education in the Schools of Wales review commissioned by the Welsh Government[28], Professor Dai Smith said powerfully 'It is clear...that countries across the world

[28] Smith, D (2013) *An independent report for the Welsh Government into Arts in Education in the Schools of Wales* Arts Council of Wales

recognise the significance and potential of the arts in enabling improved educational, social and economic outcomes'[29].

The expressive arts provide inspiration and motivation as they bring children and young people into contact with the creative processes, performances and products of others and stimulate their own experimentation and creativity. They provide many opportunities for experiences such as visits to theatres and galleries and for bringing the specialist expertise of, for example, artists and musicians into the classroom. Achievement in the expressive arts also provides a basis for lifelong participation and can ultimately contribute to a thriving economy and cultural life for Wales.

Scope and connections with other Areas of Learning and Experience

The Expressive arts Area of Learning and Experience will span art, drama, music, dance, film and digital media, encompassing wider creative aspects such as improvisation. The Review has taken account of the report of the review of Arts in Education in the Schools in Wales[30], which described 'the arts' as including the making, performance, expression or appreciation of one or more of: music; drama; dance; film and digital media; visual arts and design; literature and creative writing. All of these art forms will be addressed within the curriculum, mainly through the Expressive arts Area of Learning and Experience, but outcomes for literature and creative writing will form part of the Languages, literacy and communication Area of Learning and Experience. There will also be connections between the Expressive arts Area of Learning and Experience and the technologies components of the Science and technology and Humanities Areas of Learning and Experience in interpreting and expressing meaning.

Illustrative examples of how children and young people's experiences in the Expressive arts Area of Learning and Experience can contribute to all four purposes of the curriculum include:

- (ambitious, capable learners) encouraging them to explore new and challenging areas of experience and to strive to improve their performance
- (enterprising, creative contributors) developing their creativity in a range of forms of expression; providing rich contexts and challenges within which they can work collaboratively, learning from critical appraisal of their work
- (ethical, informed citizens) enabling them to understand their own cultural identity and those of societies in other places and at other times, and to explore complex and difficult issues
- (healthy, confident individuals) helping them to develop resilience and feel more confident as they gain enjoyment and personal satisfaction from creative expression; contributing directly to enriching the quality of their lives.

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[29] Smith, D (2013) *An independent report for the Welsh Government into Arts in Education in the Schools of Wales* Arts Council of Wales

[30] ibid. Smith, D (2013)

Rationale

Children and young people need to experience social, emotional and physical well-being to thrive and engage successfully with their education. The Health and well-being Area of Learning and Experience will help them to build the knowledge, understanding and skills that will enable them to develop positive and appropriate relationships, deal with the difficult issues and decisions they will face and learn to live independently. In discussions for the Review, many children and young people felt that these were some of the most important issues that they needed to learn about in school.

Improving the health and well-being of the nation has been an important feature of Welsh Government policy and support to schools for many years. These concerns are highlighted by the report of the Schools and Physical Activity Task and Finish Group[31]. The Health and well-being Area of Learning and Experience aims to help to address concerns about physical activity and diet, for example, as children and young people engage in different kinds of physical activity and gain knowledge and practical skills for healthy eating. As children and young people develop habits that will promote their own and others' well-being this will make a contribution to reducing health inequalities and improving well-being more widely.

Scope and connections with other Areas of Learning and Experience

This Area of Learning and Experience draws on subjects and themes from PE, mental, physical and emotional well-being, sex and relationships, parenting, healthy eating and cooking, substance misuse, work-related learning and experience, and learning for life. It is also concerned with how the school environment supports children and young people's social, emotional, spiritual and physical health and well-being through, for example, its climate and relationships, the food it provides, its joint working with other relevant services such as health and social work, and the access it provides to physical activity.

Teachers will be able to make strong connections between the Health and well-being Area of Learning and Experience and the Expressive arts and Languages, literacy and communication (for example the exploration of relationships through drama and literature), Humanities (for example ethical matters, informed by RE), and Science and technology (for example nutrition, reproduction) Areas of Learning and Experience.

Illustrative examples of how children and young people's experiences in the Health and well-being Area of Learning and Experience can contribute to all four purposes of the curriculum include:

- (ambitious, capable learners) putting into practice their knowledge and understanding of social, physical and emotional health in their own lives

[31] School and Physical Activity Task and Finish Group (2013) *Physical Literacy – an all-Wales approach to increasing levels of physical activity for children and young people* Welsh Government

- (enterprising, creative contributors) developing the skills and attributes for successful participation in work; taking part in team endeavours; mentoring and supporting others
- (ethical, informed citizens) understanding the consequences of actions that affect others and themselves and taking these into account in actions and decisions; understanding health, legal, political and ethical issues associated with drug and alcohol policy
- (healthy, confident individuals) knowing how to keep safe in a range of different circumstances and where to go for help; undertaking regular physical activity; developing and maintaining positive relationships.

Rationale

The Humanities Area of Learning and Experience provides fascinating contexts for children and young people to learn about people, place, time and belief. It will give them an understanding of historical, geographical, political, economic and societal factors and provide opportunities to engage in informed discussions about ethics, beliefs, religion and spirituality. Children and young people will learn to consider how these different factors interrelate, and develop an understanding of themselves and other people, their own locality, Wales and the world in a range of times, places and circumstances.

The Humanities Area of Learning and Experience provides rich opportunities for learning beyond the school walls, for example through exploring the local environment and learning from the experience of people and organisations and businesses in the community. Children and young people will also gain the knowledge and skills to understand and contribute to the communities in which they live and engage with societal issues.

The proposal for the new curriculum is that RE sits within the Humanities Area of Learning and Experience, encouraging links to the other aspects of this Area. RE can and should provide valuable experiences for children and young people that contribute to each of the purposes of education. Despite the positive ways in which RE can contribute to the education of learners in the twenty-first century its position on the curriculum has been fragile[32]. Its role can be misunderstood as being about the promotion of a particular faith or belief system rather than developing respect and understanding of different forms of religion over time and in different societies. In order to maintain the entitlement for all learners from

[32] For this reason RE has been protected by law as a statutory subject within the basic curriculum since 1944. The breadth and balance of statutory RE in maintained schools is protected by local committees represented by a range of interested parties (SACREs) who ensure that (among other statutory duties) a range of religions is studied, and that the RE provided in schools is objective, balanced and does not indoctrinate learners. They also ensure that parents'/carers' right of withdrawal is safeguarded.

four/five years old, it is proposed that RE, and the national expectations for RE, should remain a statutory curriculum requirement[33].

Scope and connections with other Areas of Learning and Experience

The Humanities Area of Learning and Experience draws on history, geography, RE, business and social studies. It provides a wide range of opportunities for connections with all of the other Areas of Learning and Experience, for example in Expressive arts (historical, geographical, geopolitical and religious influences on culture), Mathematics and numeracy (interpreting data), Languages, literacy and communication (through research, discussion and writing about complex issues in the humanities; exploring links between culture and language through a modern foreign language), Science and technology (climate change, environmental issues), Health and well-being (ethical issues, diversity and equality).

Illustrative examples of how children and young people's experiences in the Humanities Area of Learning and Experience can contribute to all four purposes of the curriculum include:

- (ambitious, capable learners) gaining a solid base of knowledge and understanding of different times, places and beliefs; recognising and applying appropriate tests of the validity and reliability of evidence used to support arguments
- (enterprising, creative contributors) engaging in activities that develop enterprising skills and dispositions; understanding how to exercise their democratic rights and responsibilities
- (ethical, informed citizens) using a variety of historical, geographical, social, political and religious perspectives to address contemporary issues; understanding different beliefs and respecting those who hold them
- (healthy, confident individuals) developing personal stances on matters of faith and spirituality; having the confidence arising from authoritative research to adopt personal stances on issues such as sustainability and social inclusion.

Recommendation

9. **Religious education should form part of the Humanities Area of Learning and Experience, and should remain a statutory curriculum requirement from reception.**

[33] It should be noted that in schools with a religious character the breadth and balance of statutory RE is protected by the appropriate denominational body ensuring that RE reflects the teaching and beliefs of the particular religious tradition. In schools with a religious character RE 'aims to deepen learners' understanding of their faith, not in a way that indoctrinates, but rather to promote knowledge and understanding of the particular faith upon which it focuses' – Welsh Government (2011) *Faith in Education*.

Rationale

Language is the essence of thinking and is integral, not just to effective communication, but to learning, reflection and creativity. This Area of Learning and Experience provides the fundamental building blocks for different forms of communication, literacy and learning about language, and also opportunities to develop competence in different languages.

Being able to listen attentively and speak lucidly and understandably or to use non-verbal communication effectively are crucial attributes in learning and life more generally. Developing oracy – the capacity to develop and express ideas through speech – is of central importance to both thinking and learning.

Exposure to literature extends children and young people's understanding of the power of language. It can stimulate imagination, challenge thinking and introduce new ideas. This Area of Learning and Experience can generate a love of reading that will enrich lives and contribute to present and future well-being.

The pervasive influence of digital technologies on children and young people's lives poses new challenges and opens up fresh possibilities for language learning. Issues of register, audience, ethics and meaning can all be explored in this evolving context.

The role of multiple language learning is particularly important in Wales. Learning other languages introduces children and young people to other cultures. There is also evidence that successful learning of another language can influence the capacity to learn subsequent languages and may have wider cognitive benefits. The teaching and learning of Welsh is a priority for the Welsh Government. It forms a key element of this Area of Learning and Experience, with the intention that Welsh language will be compulsory to age 16. (Further issues relating to the Welsh language within the curriculum are discussed later in this chapter.)

Multiple language learning presents particular challenges for curriculum design, particularly in primary schools. The creation of sufficient time and the investment in necessary resources will inevitably pose difficult questions about priorities. However, this Area of Learning and Experience provides a means of exploiting the links between English, Welsh and modern foreign language learning, encouraging children and young people to transfer what they have learned, for example, in English about how language works to Welsh or modern foreign languages. They can thus gain a secure understanding of the structure of languages. This, along with an appreciation of words and their origins, can help children and young people to become excited about and interested in language.

The Review believes that the acquisition of modern foreign languages will benefit from the earlier development of the Welsh language, and recommends that this third and/or fourth language should therefore be introduced in the first year of secondary schooling, or earlier where time, circumstances and expertise allow.

Scope and connections with other Areas of Learning and Experience

This Area of Learning and Experience encompasses the progressive development of skills in listening and speaking (oracy), reading and writing in English and Welsh; modern foreign languages; digital communication; and literature. It has obvious connections with all of the other Areas of Learning and Experience.

Illustrative examples of how children and young people's experiences in the Languages, literacy and communication Area of Learning and Experience can contribute to all four purposes of the curriculum include:

- (ambitious, capable learners) having a high level of competence in literacy in English and Welsh; using and understanding increasingly abstract language to explore and develop ideas; learning to use additional languages
- (enterprising, creative contributors) using oral and written language skills in different settings with an appropriate sense of audience and using different media; communicating effectively in the Welsh language in different settings, including for work settings
- (ethical, informed citizens) sensitively questioning and critically appraising different points of view; detecting bias in the use of language
- (healthy, confident individuals) communicating their thoughts, views and feelings sensitively and participating confidently in different social contexts.

Rationale

The Mathematics and numeracy Area of Learning and Experience is concerned with developing a good, lasting understanding of mathematical concepts and the confidence to use and apply numerical skills in everyday life. It includes experiences that enable children and young people to develop their broader numeracy and financial skills by exploring relationships in quantities, space and data, and to apply them to real-life situations.

Mathematics helps children and young people to make sense of the world around them and to manage their lives. It gives them skills they need to interpret and analyse information, solve problems and make informed decisions. Taught well through relevant contexts, mathematics can engage and fascinate children and young people of all interests and abilities. It provides strong support for the development of wider skills, particularly critical thinking and problem solving, planning and organisation, and creativity and innovation. It enables people to communicate ideas in a concise, unambiguous and rigorous way, using numbers and symbols. A high level of numeracy and mathematical competence is important for the prosperity of the country.

Scope and connections with other Areas of Learning and Experience

This Area centres on the discipline of mathematics, including the traditional components of arithmetic, mathematics and statistics together with logic. It provides prerequisite knowledge and skills for much of the learning in science, including computer science, and technology, but also underpins learning across the curriculum, particularly in Health and well-being and Humanities Areas of Learning and Experience.

Illustrative examples of how children and young people's experiences in the Mathematics and numeracy Area of Learning and Experience can contribute to all four purposes of the curriculum include:

- (ambitious, capable learners) having the knowledge and competence to apply numeracy skills and mathematical understanding confidently in a wide range of contexts, notably in science, computer science and technologies; gaining a sense of achievement by solving tricky mathematical puzzles and problems
- (enterprising, creative contributors) solving numerical and mathematical problems; applying numerical, mathematical and digital skills to creative and design challenges, working individually and in groups
- (ethical, informed citizens) critically analysing data to form informed views on social, political, economic and environmental matters
- (healthy, confident individuals) gaining the knowledge and skills to manage personal finance now and in the future; interpreting information and data to assess risk.

Rationale

Science and technology are closely linked, each depending upon the other. Science involves acquiring knowledge through observation and experimentation, and technology applies scientific knowledge in practical ways. This Area of Learning and Experience capitalises on children and young people's curiosity about our natural, physical world and universe though investigating, understanding, and explaining. They learn to generate and test ideas, gather evidence, make observations, carry out practical investigations, and communicate with others. They also learn how through computer science, the horizons of what is possible can be extended beyond our current imagination.

Children and young people will also have opportunities to learn how technology is used to design products that improve the quality of human life and to apply their scientific and other knowledge to practical purposes and challenges. For schools, this means providing children and young people with rich opportunities to develop technological skills, knowledge, understanding and attributes through designing and developing products and systems. They will be able to explore the impact of technology on society and the environment. Learning in the Science

and technology Area of Learning and Experience will enable many young people to prepare for careers in science, digital industries and technologies.

The Review proposes the introduction of computer science – spanning, for example, the kinds of thinking skills used in computation (including analysis, use of algorithms and problem solving), design and modelling, and developing, implementing and testing digital solutions – as a specific component within the Science and technology Area of Learning and Experience. The ICT Steering Group's report to the Welsh Government[34] in 2013 outlines its vision that Wales should become 'an Agile-Digital Nation, renowned for producing talented technology innovators, leading software engineers, successful entrepreneurs and other related roles capable of becoming world leaders and contributing to the success of a thriving digital industry in Wales'. It argues that introducing computing into the curriculum would help to create economic and social advantages for all children educated in Wales and enable Wales to become a world leader in computing and digital skills.

Scope and connections with other Areas of Learning and Experience

The Science and technology Area of Learning and Experience will draw on physics, chemistry and biology, engineering, design technology (food, textiles, resistant materials), craft, design, graphics and, importantly, computer science, learning from the 14–19 Learning Pathways domain of mathematics, science and all aspects of technology. There are links between this Area of Learning and Experience and, for example, the Humanities (business and industry), Mathematics and numeracy (considering costs and benefits) and Health and well-being (medical uses of technology) Areas of Learning and Experience.

Illustrative examples of how children and young people's experiences in the Science and technology Area of Learning and Experience can contribute to the four purposes of the curriculum include:

- (ambitious, capable learners) gaining a solid base of knowledge and understanding of key concepts in science; developing skills in observation, research and critical thinking; becoming skilled in the creative use of technologies
- (enterprising, creative contributors) designing processes and creating digital products and objects; working with others to develop novel solutions and to create products for the marketplace
- (ethical, informed citizens) evaluating the impact of scientific and technological developments; taking informed personal stances on ethical issues associated with scientific and technological innovation
- (healthy, confident individuals) learning to make use of scientific data to assess risk and take informed decisions; using digital technologies safely and with respect for others.

[34] Arthur, S, Crick, T, Hayward, J (2013) *The ICT Steering Group's Report to the Welsh Government*

Structuring learning (2): Progression Steps

The second dimension of the curriculum structure is progression: how children and young people will make progress in their learning, and at what pace. Characteristics of progression include:

- a capacity to engage with ideas and issues in greater depth
- success in tackling more complex problems and being able to grasp more abstract concepts
- becoming more accomplished in performance
- building a solid foundation of basic grammar and spelling and gaining a secure grasp of number bonds.

Schools, teachers, parents and carers need reference points for determining whether children and young people are making appropriate progress in their learning. At the national level, the Welsh Government also needs to be satisfied that the system as a whole is meeting expectations of progress and attainment.

As shown on the table on page 34, the current national curriculum is based upon the Foundation Phase and key stages, with outcomes or level descriptions at the different stages. That approach has much to commend it but practice since 1988 and evidence presented to the Review suggest a number of issues of concern about its continuing utility.

- Division into the separate stages, which tend to have distinctive philosophies and approaches, has had the effect of creating additional transition points. Negative effects are evident in the transitions between the Foundation Phase and Key Stage 2, Key Stages 2 and 3, and Key Stages 3 and 4. In each case, shifts in philosophy or approach at transition points can hinder progression and there was evidence that this could contribute to disengagement as young people progress through school.
- Successive stages can influence each other in unintended ways, for example by placing ceilings on expectations or causing teachers to distort teaching to avoid addressing things that may follow in the next stage. This can create a confused context for smooth progression.
- National curriculum levels are very broad and have often come to be used to make judgements about a generalised ability rather than being seen as staging posts in all important aspects of learning that could be used to inform the kinds of support or additional challenge that might assist the child or young person's progress.
- The wider accountability context has contributed to an environment within which speed in jumping the level hurdles has become the goal, overriding the need for consolidation and depth in learning as a sound foundation for further progress.

The Review proposes the following.

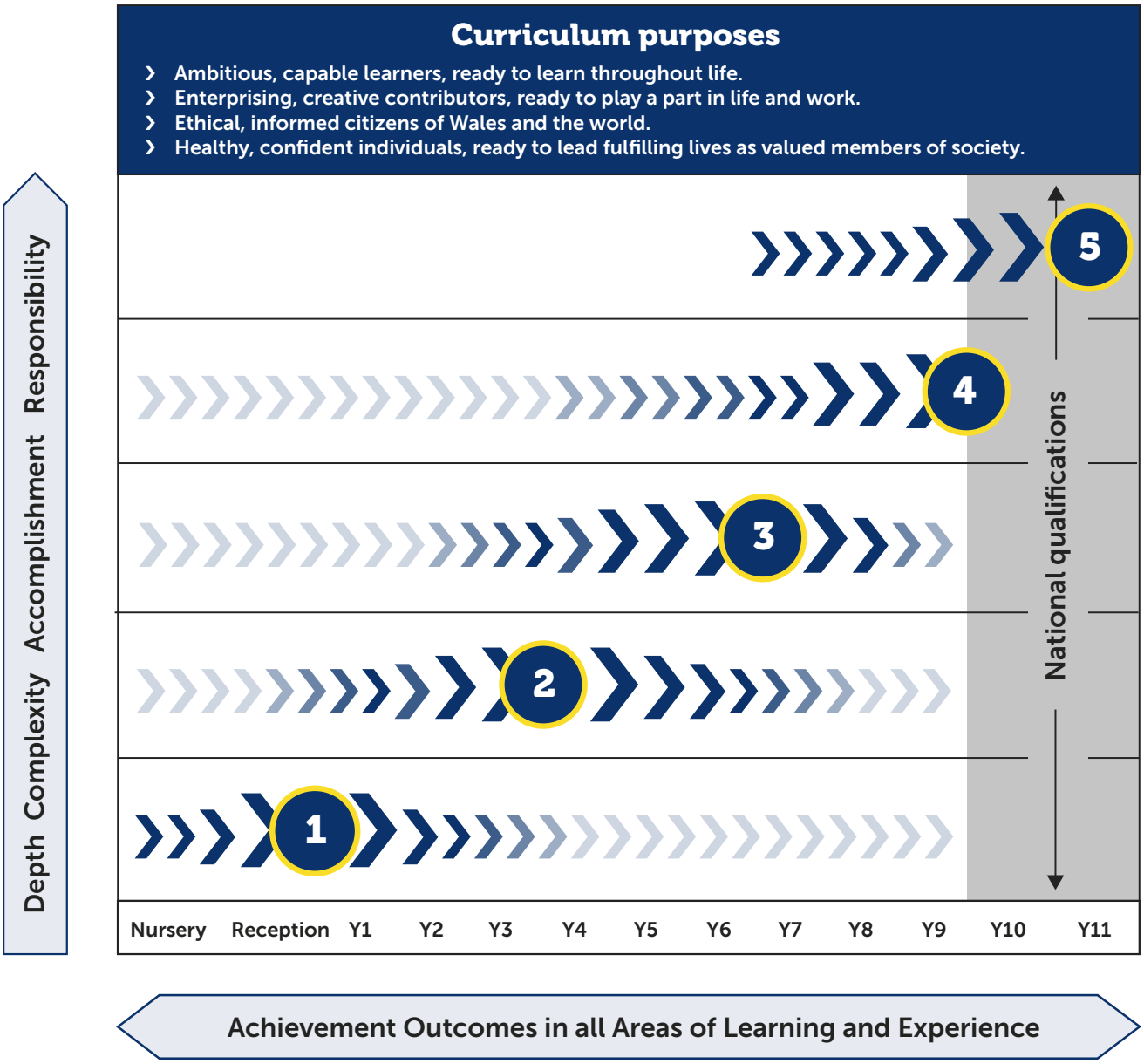
To address these points, and support the achievement of the four purposes of the curriculum, the Review proposes a revised approach to progression, spanning ages 3–16, within the proposed Areas of Learning and Experience and including Cross-curriculum Responsibilities.

The approach recognises that children and young people will progress at different rates and that there should be an emphasis on ensuring sound foundations in learning as the best basis for progression.

- Phases and key stages should be removed in order to improve progression, and therefore increase potential for higher attainment by minimising transitions and shifts in purposes and approach at intervals in school careers.
- Progression in each Area of Learning and Experience or Cross-curriculum Responsibility should be based on a well-grounded, nationally described continuum of learning that flows from when a child enters education through to the end of statutory schooling at 16 and beyond. Learning will be less fragmented because all teachers will understand how their input contributes ultimately to the end point in the continuum of learning.
- Learning should be seen as akin to an expedition, with stops, detours and spurts. Progression should be signalled through Progression Steps, rather than levels. Progression Steps at regular intervals will provide a 'road map' for each individual child and young person's progress in their learning.
- Progression Steps will be described at five points in the learning continuum, relating broadly to expectations at ages 5, 8, 11, 14 and 16.
- Progression Step 5 will be available for young people who securely reach Progression Step 4 earlier than the end of Year 9, enabling them to extend and deepen their learning before they embark on qualifications. In due course, qualifications should be amended to articulate with Progression Steps 4 and 5.
- Initial Progression Steps should take full account of guidance on *Routes for Learning*, which should be reviewed in the new curriculum context.

- The current system of levels is based on a best-fit judgement of overall attainment in a subject at a specific point in time. However, such best-fit judgements can mask wide variations in progress in different aspects of learning and amount to a view of general ability. Each Progression Step, in contrast, should be viewed as a staging post for the educational development of every child, not a judgement.
- Progression Steps will therefore be reference points and not universal expectations of the performance of all children and young people at fixed points.
- Some children and young people will demonstrate the necessary depth and security in their learning earlier and some later.
- Progression Steps will take the form of a range of Achievement Outcomes for each Area of Learning and Experience, spanning the components within the Area of Learning and Experience and Cross-curriculum Responsibility.
- The Achievement Outcomes will contribute to the four curriculum purposes. By signalling an emphasis on achievement in a broad sense, rather than only narrower measures of attainment, these outcomes broaden the scope of what we value in children and young people's learning.
- Achievement Outcomes may also include references to experiences that are relevant to the purposes and to which children and young people should be entitled although they may not necessarily be easily measured in conventional ways.
- Achievement Outcomes within each Area of Learning and Experience will include embedded literacy, numeracy, digital competences and wider skills as appropriate, as well as elements of the Cwricwlwm Cymreig.
- Drawing on experience in Scotland, Achievement Outcomes will be described from the learner's point of view, using terms like 'I have...' for experiences and 'I can...' for outcomes.
- The structure will be inclusive, with all children and young people making progress along the same continuum, regardless of any additional learning needs they may have, although they may move between Progression Steps more slowly or quickly than others. Because of the particular barriers that they face to their learning, some may take considerably longer to reach the first Progression Step or move between Steps. The significance of all such achievements should be recognised.
- There would be a duty on schools to provide a curriculum that enables most children and young people to reach, or go beyond, each Progression Step within the relevant three-year window.
- Progression Steps will also form the basis of assessment for learning, which is developed in more detail in Chapters 5 and 6.

Progression Steps



= **Progression Steps 1, 2, 3, 4 and 5 are indicative of the likely progress of most children.**

Progression recommendations

10. The new national curriculum should be organised as a continuum of learning from 3 to 16 without phases and key stages.
11. Progression should be described in relation to a continuum of learning in each Area of Learning and Experience from when a child enters education to the end of statutory schooling.
12. Progression should be signalled through Progression Steps at five points in the learning continuum, relating broadly to expectations at ages 5, 8, 11, 14 and 16.
13. The initial Progression Steps should take full account of guidance on *Routes for Learning*, which should be reviewed in the new curriculum context.
14. Progression Steps should be reference points, providing a 'road map' for each individual child and young person's progress in their learning and not universal expectations of the performance of all children and young people at fixed points.
15. There should be a duty on schools to provide a curriculum that enables most children and young people to reach, or go beyond, each Progression Step within the broad three-year window.

Achievement Outcome recommendations

16. Achievement Outcomes should be developed for each Progression Step in each Area of Learning and Experience, spanning the components within the Area of Learning and Experience and addressing the Cross-curriculum Responsibilities and wider skills.
17. Achievement Outcomes should contribute clearly to the four curriculum purposes and should have an emphasis on achievement in a broad sense, rather than only narrower measures of attainment. They should include references to relevant experiences which contribute to the curriculum purposes and to which children and young people should be entitled.
18. Achievement Outcomes should be described from the learner's point of view, using terms like 'I have...' for experiences and 'I can...' for outcomes.
19. All children and young people should make progress along the same continuum, regardless of any additional learning needs they may have, although they may reach and move between Progression Steps more slowly or more quickly than others.
20. There should be a clear brief for the development of the Achievement Outcomes, as indicated in this report.

Progression within the Areas of Learning and Experience

Whatever reference points are used, it is essential that these are based upon sound understanding of how children progress in different kinds of learning and what they need to know and be able to do in order to move to the next stage securely. The Achievement Outcomes at each Progression Step will need to encapsulate the most important aspects of learning, take account of the ways in which children progress in different kinds of learning, and recognise what they need to be able to know and do in order to move securely to the next stage. The following are some illustrations of how Achievement Outcomes might indicate progression in each Area of Learning and Achievement.

In the **Expressive arts Area of Learning and Experience** children and young people may demonstrate progression in their learning by, for example, displaying increasing skills and confidence in performance and extending their capacity to use digital media in creative ways.

In the **Health and well-being Area of Learning and Experience** they may demonstrate progression through increasing competence in, and taking greater responsibility for, organising themselves, and through greater depth of knowledge and understanding about factors affecting their well-being and that of others.

In the **Humanities Area of Learning and Experience** they may demonstrate growing skill in analysing evidence and in understanding and explaining issues. They may broaden and deepen their understanding of different beliefs and their impact on believers.

In the **Languages, literacy and communication Area of Learning and Experience** they may develop increasing mastery of techniques that will enable them to communicate. They may demonstrate progression through the length, complexity and accuracy of written and spoken language, and show increasing confidence and capacity to converse about a widening range of topics in the Welsh language. They will be able to engage critically with increasingly challenging literary work.

In the **Mathematics and numeracy Area of Learning and Experience** they will gain an understanding of quantity and number and, for example, be able to explain increasingly abstract ideas in algebra, use increasingly sophisticated methods to analyse and present numerical information, draw on skills they have already learned when faced with new challenges, complete increasingly demanding calculations in relation to personal finance, and interpret the results.

In the **Science and technology Area of Learning and Experience** they will initially explore the world around them. They may demonstrate progression by being able to explain increasingly complex scientific contexts and concepts; analysing, presenting, interpreting and making deductions from increasingly complex evidence; increasing in independence and confidence when tackling challenging design tasks; developing increased dexterity and precision in practical skills; and engaging with increasingly complex aspects of computing.

The place of the Welsh language in the curriculum

Following the Education Reform Act 1988, Welsh became compulsory for every pupil at Key Stages 1, 2 and 3 in 1990. From September 1999, compulsion was extended to Key Stage 4. The Welsh Language Development Area of Learning in the Foundation Phase for 3 to 7-year-olds has also meant that children in English-medium settings and schools start to learn the Welsh language from the age of three. More recently, the Welsh Government has shown its commitment to developing Wales as a bilingual nation through its Welsh Language Strategy[35].

The cultural, cognitive and practical benefits of learning Welsh as a living language provide a strong case for its inclusion as a compulsory element in the school curriculum. The factors that influence the formation and preservation of cultural identity are open to wide and heated debate but the central importance of language in that process would be generally accepted. In her foreword to *One language for all: Review of Welsh second language at Key Stages 3 and 4* (2013), Professor Sioned Davies offers the view that 'The future of Welsh and Welsh culture is wholly dependent on transmitting the language to our young people'[36]. This report is not the place to rehearse the cultural arguments for preserving the Welsh language but the Review is happy to accept both the case for, and the national commitment to, that case and to recommend that the Welsh language be retained as a compulsory part of the school curriculum 3–16.

[35] Welsh Government (2012) *A living language: a language for living – Welsh Language Strategy 2012–17* Welsh Government

[36] Welsh Government (2013) *One language for all: Review of Welsh second language at Key Stages 3 and 4 – Report and recommendations* Welsh Government

The possible cognitive benefits from being bilingual are referred to in the rationale for the Languages, literacy and communication Area of Learning and Experience. There are also increasingly strong pragmatic reasons for acquiring fluency in the language. The Welsh Language Commissioner reports a significant shortage of people in the workforce who can work effectively in both English and Welsh, particularly in health, social care and tourism. She emphasises that the greatest need in these particular areas is not for employees who have advanced qualifications in Welsh, but for people who can hold everyday conversations in Welsh with the patients and clients with whom they come into contact.

Rhieni dros Addysg Gymraeg (RhAG) believes firmly that bilingualism is a real benefit and that it supports the learning of further languages and opens doors to children and young people as they move into the workplace. The Welsh Language (Wales) Measure 2011 sets out a framework to introduce a duty on specified organisations to comply with standards to do with the Welsh language. In future, organisations in the public and private sector will, increasingly, require staff that can use Welsh confidently for a range of purposes in their jobs. All of these developments have implications for the curriculum.

Welsh Government policy is for the Welsh language to have a firm place in the curriculum in all schools for children and young people from 3 to 16. In our call for evidence, Welsh and bilingualism were frequently mentioned as strengths of the education system in Wales. However, evidence gathered during the Review suggests that provision and therefore standards in Welsh second language, are patchy. In the main, school leaders and teachers, particularly in primary schools, are committed to improving provision for and standards in Welsh. However, they acknowledge significant shortcomings in the Welsh language skills of the workforce and limited knowledge of second language teaching methodology.

Evidence seen by the Review suggests that standards in the Welsh language are generally strong in Welsh-medium schools. Estyn also found that, in the majority of English-medium schools, most children make suitable progress in speaking and listening to Welsh in the Foundation Phase, and that children have a positive attitude towards learning Welsh[37]. However, it is rare that this encouraging start continues into Key Stage 2 and beyond. Estyn also reports that there is less good practice in the learning of Welsh as a second language than in other subjects. The HMCI annual report shows that levels of children and young people's attainment in Welsh second language at GCSE are lower than in any other subject.

Professor Davies states that learning the language is '...a very tedious experience' for large numbers of young people and that '...they do not regard the subject as being relevant or of any value to them'[38]. Most children and young people do not feel that the current provision for learning Welsh at Key Stages 3 and 4 enables them to be confident to use Welsh outside Welsh lessons and certainly not outside school.

The Review has accepted the case to retain the Welsh language as a compulsory part of the school curriculum 3–16, but there are clearly quality issues to be addressed if it is to be fully accepted by children and young people, their parents

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[37] Estyn (2013) *Welsh language development in the Foundation Phase* Estyn

[38] Welsh Government (2013) *One language for all: Review of Welsh second language at Key Stages 3 and 4 – Report and recommendations* Welsh Government

and carers and many of their teachers. In particular, there is a need to build children and young people's confidence to use the language not only in lessons but also in activities and real-life situations outside the classroom and outside school.

Having considered all of the evidence presented to the Review, and in particular the wide-ranging recommendations in Professor Davies' report, the Review makes the following recommendations.

Recommendations

21. The Welsh language should remain compulsory up to the age of 16.

22. There should be a renewed focus in schools on learning Welsh primarily as a means of communication, particularly oral communication and understanding.

23. Progression in the Welsh language towards transactional competence at age 16 should be appropriately reflected in the related Progression Steps and Achievement Outcomes.

24. The value attached to the Welsh language by children and young people, teachers, parents, carers and the public should be enhanced by strengthening the focus on its commercial value for the jobs market, the suggested cognitive benefits of bilingualism and its importance in enabling children and young people to achieve a good understanding of the cultural life of Wales in the past and present.

25. Investment in and improvements to provision and the raising of standards should focus on strengthening the language in primary schools in order to create solid foundations for learning in Welsh and other languages in secondary school. There will also be a need for support for secondary schools to enable them to improve and adjust their provision.

26. Welsh-medium schools should act as hubs for the Welsh language, to support teachers and practitioners in English-medium schools.

27. Systematic links should be established between schools and outside agencies that can support teaching, learning and the provision of resources in Welsh and modern foreign languages, including further and higher education providers and Mentrau Iaith.

28. Significantly better and more creative use should be made of technology in the teaching and learning of Welsh and also modern foreign languages.

29. The Welsh Government should realign Welsh language qualifications at 16 with the proposed focus on speaking and listening and application in the workplace.

30. Implications for enhancing competence in the Welsh language in the education workforce should be taken forward through the New Deal for the Education Workforce and Professor Furlong's review of teacher education.

Choice

Choice is important in helping to engage children and young people in their learning. The curriculum purposes can be met in a wide variety of ways and allow for wide variations in the experiences of individual children and young people. Up to the age of 14, the presumption in the Review is that they will all be working towards successive Progression Steps within and across all the Areas of Learning and Experience. However, the spacing of the steps at three-yearly intervals allows for a measure of choice, for example in topics for research, within these intervals if the school sees that as appropriate. Similarly, teaching and learning methods can and should offer opportunities for children and young people to choose particular activities and experiences, again in line with the school's overall approach.

From about the age of 14 onwards, young people begin to specialise and make choices. Implicit in these recommendations is the notion that, irrespective of their choices, all young people between the ages of 14 to 16 should continue to have experiences and opportunities to study that promote the four purposes of education, as well as continue to develop their literacy skills, numeracy skills, digital competence and wider skills, in line with the requirements of the new Welsh Baccalaureate. Young people should have an entitlement to select courses and undertake activities from all the Areas of Learning and Experience based upon Achievement Outcomes at the relevant Progression Step, in ways that reflect the requirements of 14–19 Learning Pathways and the Learning and Skills (Wales) Measure 2009. As far as possible, schools should provide each young person with experiences that reflect all of the Areas of Learning and Experience. Some of these programmes will lead to recognised qualifications but other planned activities may lead to other forms of achievement which may be recognised in different ways.

Although young people will choose some of their courses for the period from 14 to 16, there are some aspects of the curriculum that all young people should continue to study regardless of those choices. These aspects include those that reflect national priorities, such as the Welsh language, and health and well-being, those that are crucial to the future of the Welsh economy, such as science, and those such as RE that are important to achieving some of the characteristics of the four purposes that would not be achieved otherwise, and literacy, numeracy and digital competence.

Recommendation

31. Between the ages of 14 and 16, all young people should select courses or undertake activities from each of the Areas of Learning and Experience, hence maintaining breadth and meeting national priorities, including science and health.

Chapter 5: Pedagogy

Successful embedding of the Review's proposals on the purposes and structure of the curriculum will depend ultimately on what happens in classrooms. There is an increasingly powerful body of evidence about the central importance of good teaching to effective learning[39 40 41 42 43 44]. Taking full account of the implications for pedagogy, therefore, will be vital if the recommendations of this Review are to have the intended positive impact on learning and achievement. This chapter therefore addresses the fundamental interdependency between the purposes of the curriculum and pedagogy.

Pedagogy is about more than 'teaching' in the narrow sense of methods used in the classroom. It represents the considered selection of those methods in light of the purposes of the curriculum and the needs and developmental stage of the children and young people. It combines theoretical and practical knowledge and skills with fine judgement about what is required to promote effective learning in particular contexts. It lies at the heart of what it means to be an excellent teacher.

What are the implications for pedagogy of the Review's proposals?

The elements of good teaching include in various ways: subject and methodological expertise; sound classroom craft skills; an understanding of the social and psychological factors that influence learning; and the ability to excite and inspire children to want to learn and to be able to learn independently. There is a risk that changes to curriculum structures can be interpreted as implying particular pedagogical approaches. To be clear, the recommendations of this Review do not imply an emphasis on any particular teaching approaches: decisions about teaching and learning are very context and purpose specific, and are best taken by teachers themselves. It would, therefore, not be appropriate for this Review to offer detailed prescriptions on teaching methods.

However, a number of pedagogical principles relate directly to the purposes outlined in Chapter 3 and the suggested curriculum and assessment arrangements[45].

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[39] Donaldson, G (2011) *Teaching Scotland's Future: Report of a review of teacher education in Scotland* Scottish Government

[40] Elmore, R F (2004) *School Reform from the Inside Out: Policy, Practice And Performance* Harvard Education Press

[41] Hargreaves, A and Fullan, M (2012) *Professional Capital: Transforming Teaching in Every School* Teachers' College Columbia University

[42] Hattie, J (2009) *Visible Learning: A Synthesis of Over 800 Meta-analyses Relating to Achievement* Routledge

[43] Payne, C M (2008) *So Much Reform So Little Change: The Persistence of Failure in Urban Schools* Harvard Educational Press

[44] OECD (2005) *Teachers Matter: Attracting, Developing and Retaining Effective Teachers* OECD

[45] While the nature and content of the principles outlined here are different, the overall approach is similar to that of the Teaching and Learning Research Project's *Principles into practice: A teacher's guide to research evidence on teaching and learning* that was provided to schools by the Welsh Government in 2007.

1. Good teaching and learning maintains a consistent focus on the overall purposes of the curriculum

A central theme in the Review has been the need to be clear about the overall purposes that the curriculum is seeking to serve. That principle should apply equally to the selection of teaching and learning approaches. While it is difficult to maintain such a long-term focus on a day-to-day basis, it is important that the balance of experiences offered to children and young people is regularly reviewed in relation to the curriculum purposes.

The four curriculum purposes proposed by the Review will inevitably require a wide repertoire of teaching and learning approaches. By embedding the Cross-curriculum Responsibilities and wider skills in each Area of Learning and Experience the new structure gives clear signals about related teaching approaches. The intention is to release the creativity and energy of teachers to provide rich learning for children and young people.

2. Good teaching and learning challenges all learners by encouraging them to recognise the importance of sustained effort in meeting expectations that are high but achievable for them

The proposed Progression Steps should set expectations that challenge children and young people to have high personal aspirations and achievement. Teaching should proceed on optimistic assumptions about its ability to make a difference in ways that will encourage such high aspirations in all learners: 'Notions such as talent, ability and intelligence...are not sufficient to explain learning or achievement'[46]. Self-limiting beliefs about fixed 'potential' are difficult to alter and can have a profoundly negative effect on learning. The consistent message should be that sustained effort is integral to good learning and can lead to high achievement.

Praise and support are essential but the opportunity to make and learn from errors in the pursuit of challenging goals builds confidence and resilience. Teaching approaches that engage learners' interest in relation to goals that they see as worthwhile can release additional discretionary effort and a 'can do' attitude. Tests or examinations are often used to prompt such motivation but the skill of the good teacher lies in establishing in children and young people the more intrinsic satisfaction that comes from making the effort to address and succeed with challenging tasks. In that way, lifelong learning can become a matter of personal fulfilment as opposed to one-off responses to external demands.

All children and young people will encounter difficulties with learning of one kind or another at different points in their school careers. Such difficulties need to be

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[46] Hattie, J and Yates, G (2013) *Visible Learning and the Science of How We Learn* Routledge

identified early and addressed before they become entrenched. Early intervention is therefore an integral part of good teaching and learning.

3. Good teaching and learning means employing a blend of approaches including direct teaching

Changes to the curriculum are often associated with moves to encourage particular approaches to teaching and learning. On the one hand, they can be seen as a reassertion of 'traditional' methods, sometimes described as 'direct teaching', while on the other hand they may be seen as favouring discovery learning or constructivism. Such polarisation fails to reflect the complexity of decisions about appropriate teaching and learning approaches. This Review, therefore, should not be regarded as falling into a particular 'camp'; rather, it implies the need for a broad repertoire of teaching and learning experiences that reflect the curriculum purposes.

A particular risk lies in direct teaching being caricatured as didactic, whole-class instruction. However, Hattie powerfully defines direct teaching as follows: 'The teacher decides the learning intentions and success criteria, makes them transparent to the students, demonstrates them by modelling, evaluates if they (the students) understand what they have been told by checking for understanding, and re-telling them what they have been told by tying it all together with closure'[47]. Its essence lies in clear purposes and success criteria, modelling and practice, and regular and insightful feedback. In this way, direct teaching involves the active engagement of the teacher in 'scaffolding' learning. Creating contexts within which learners can demonstrate the ability to apply learning independently in unfamiliar settings is an important part of that scaffolding.

4. Good teaching and learning means employing a blend of approaches including those that promote problem solving, creative and critical thinking

The curriculum purposes give prominence to developing the ability of children and young people to critically evaluate information, make connections, develop deep conceptual understanding and transfer knowledge and skills to new situations to solve complex problems in a creative way[48]. Pedagogy that makes full use of wider skills within and across each Area of Learning and Experience, particularly problem solving, creative and critical thinking, is likely to activate such powerful learning for children and young people.

OECD suggests that the problem-solving process involves 'exploring and understanding' the problem and its context; 'representing and formulating'

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[47] Hattie, J (2009) *Visible Learning: A Synthesis of Over 800 Meta-analyses Relating to Achievement* Routledge

[48] OECD (2008) *Innovating to Learn, Learning to Innovate* OECD

information gathered to create hypotheses; 'planning and executing' investigations, identifying success criteria; and 'monitoring and reflecting' on progress and outcomes[49]. Creative and critical thinking are an essential part of problem solving[50], providing processes for analysis, synthesis and evaluation of ideas and products, and making unique connections between or among them. Such creativity relies heavily on access to high-quality authentic information from a range of subject disciplines that act as a catalyst for innovation.

In order to fully engage with learning, children and young people require rich, stimulating environments where they can explore and experiment with ideas and resources, collaborate actively with their peers and make dynamic connections with a clear sense of purpose to construct meaning.

Good teaching in the context of the Review's curriculum proposals will reinforce and extend the application of wider skills and be able to identify activities and strategies that can promote problem solving, critical and creative thinking and ensure that these processes can be monitored and assessed to ensure positive learning outcomes.

[49] Explanations for each of these can be found in OECD (2013), *Pisa 2012 Assessment and Analytical Framework Mathematics, Reading, Science, Problem Solving and Financial Literacy* OECD

[50] ibid. OECD (2013)

5. Good teaching and learning sets tasks and selects resources that build on previous knowledge and experience and engage interest

The strong emphasis on progression advocated by the Review means that teachers will need to set tasks and select resources that build on previous knowledge and experience and engage interest. Children and young people arrive at school with different aspirations, interests and experiences and so will approach learning in their own particular way. A one-size-fits-all approach to learning will not meet this wide range of needs. At the same time, however, we must be careful not to assume too much about our ability to identify such needs and wants and be alive to the danger of separating children into potentially superficial groupings.

The Progression Steps proposed by the Review will provide a context within which teachers can select teaching and learning approaches that build from one step to the next but that still provide significant freedom to offer engaging experiences that match their children and young people's needs.

6. Good teaching and learning creates authentic contexts for learning

The curriculum purposes and Progression Steps will reinforce the need to make learning meaningful and authentic. Mick Waters describes good teaching as bringing 'the world into range'[51]. It is important that children and young people see the relevance in their learning to the world beyond the school gates and that opportunities are taken to forge links to that world. Many schools already recognise the need to go beyond their own expertise and have forged strong links with outside bodies and individuals. The Welsh Government has encouraged outside agencies to work with schools. Visits and visitors can help to bring abstract learning to life. Similarly, the internet opens up immense possibilities to access resources, explore sources and engage with real-life issues.

Performance in its widest sense is also part of creating authenticity. Leadership skills can be fostered in classroom roles as well as through more formal participation in clubs and societies. The application of learning can and should be demonstrated in talks, debates, plays, choirs and so on – whatever form can best bring out the application of what has been learned in ways that are appropriate and not contrived.

7. Good teaching and learning means employing assessment for learning principles

Assessment for learning is explored in greater depth in Chapter 6 but it is as relevant to good teaching and learning as it is to assessment. An assessment for learning approach provides practitioners with insight into the effectiveness of

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[51] Waters, M (2013) *Thinking Allowed on Schooling* Independent Thinking Press

learning and involves providing regular and meaningful feedback and adapting teaching and materials to meet the needs of individuals. It also helps learners raise standards and nurture ambition: learning can be particularly powerful when learners are given feedback that helps them to think through the issues and provides them with guidance on next steps. Similarly, peer collaboration and feedback can provide a safe environment to articulate and test ideas.

Dylan Wiliam has suggested that effective teacher assessment can 'double' the rate of learning – that is, if implemented appropriately it could result in learners making what had previously been one year's progress within six months[52]. According to Wiliam, implementation of assessment for learning strategies is relatively straightforward; the challenge is to change practitioner behaviour to embed assessment for learning practices consistently into classroom practice.

8. Good teaching and learning ranges within and across Areas of Learning and Experience

One of the defining features of twenty-first century education will be the capacity to make connections and transfer knowledge and understanding across different contexts in order to address unfamiliar problems[53]. As indicated earlier, the Areas of Learning and Experience in the proposed curriculum should not be seen as distinct entities or timetabled subject areas, nor should the Cross-curriculum Responsibilities and wider skills be developed in isolation. Instead they should all be seen as promoting connections and unity within and between the Areas of Learning and Experience. Artificial connections would render the exercise meaningless, but if powerful connections within and between Areas of Learning and Experience can be found they are likely to improve and reinforce learning in the constituent disciplines. Pedagogical approaches that allow connections to be made via common questions, concepts or skills should be explored within and across Areas of Learning and Experience.

9. Good teaching and learning regularly reinforces Cross-curriculum Responsibilities, including literacy, numeracy and digital competence, and provides opportunities to practise them

The Review proposals will see the Cross-curriculum Responsibilities of Literacy, numeracy and digital competence, together with the wider skills, embedded in the Areas of Learning and Experience. Following consultation, the Welsh Government has embedded literacy and numeracy in existing subjects and Areas of Learning. In due course, this work will require revision to take account of the revised curriculum structure. However, the principle of embedding will remain. The proposed digital competence framework and the wider skills will similarly

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[52] www.journeytoexcellence.org.uk/videos/expertspeakers/assessmentforlearningdylanwiliam.asp

[53] OECD (2013) *Innovative Learning Environments* Educational Research and Innovation, OECD Publishing

be embedded in the Achievement Outcomes, identifying opportunities for application as part of the teaching and learning process.

The challenge for teaching posed by the Cross-curriculum Responsibilities will be to maintain the focus on these responsibilities within teaching and learning so that their application becomes natural and authentic rather than an add-on.

10. Good teaching and learning encourages children and young people to take increasing responsibility for their own learning

The curriculum purposes stress the need to develop the confidence and capacity to learn throughout life. The development of such capacities will be strongly influenced by how children and young people are taught. Learners need to become involved in planning their own learning through discussions about where they have reached and how they can best be supported to achieve future aspirations.

Metacognition, or 'learning to learn', can help learners to take greater control of their own learning[54]. Metacognition involves the knowledge that an individual has about the way they and other people think, and knowing when and how to apply skills/strategies to support learning in different situations. It also involves the ability to think strategically and use a structure (for example planning, monitoring and evaluating) to achieve a goal or solve a problem. In order to become capable learners, children and young people need to be able to stand back and observe their own process of learning, and identify how it can be improved. Working with practitioners and peers can help learners to hone their metacognitive skills because collaboration provides them with an opportunity to talk about their thinking processes, compare them with others and refine their learning skills as a result. This makes children and young people active participants in the learning process with an understanding of how to learn and how to create the best conditions for their own learning.

Some learners may require more support, more examples, more practice and so on, but it remains important that, wherever possible, they take responsibility for their own learning and set themselves ambitious goals. The essence of personalised learning lies in interactions between teachers and children and young people and among the children and young people themselves. Such interactions should be characterised by flexibility in approach and responsiveness to emerging needs.

11. Good teaching and learning supports social and emotional development and positive relationships

A 2013 OECD report suggests that '... learning cannot – and should not – be understood as a purely cognitive activity: practitioners need to be aware of and responsive to students' emotions and motivations in order for successful learning

[54] Sutton Trust, Education Endowment Foundation website at http://educationendowmentfoundation.org.uk/toolkit/meta-cognitive-and-self-regulation-strategies/

to happen... They need to feel competent to do what is expected of them and learn better when they experience positive emotions'[55].

Pedagogy that supports social and emotional aspects of learning is important across every aspect of the curriculum and is integral to pursuing the curriculum purposes. It is also an important aspect of the definition of the curriculum adopted by the Review: the climate for learning is part of the learning experience. Approaches that support learners' social and emotional well-being provide opportunities for the development of emotional intelligence and metacognition. Learners can thus reflect on their own learning and understand the positive impact that they might have on the learning of others.

12. Good teaching and learning encourages collaboration

The ability to function effectively as a member of a team is one of the key skills regularly cited by employers as essential in the modern workplace and is an important feature of the Review's proposals. Cooperative learning is also important in its own right. Hattie's research is unequivocal in concluding that, '...cooperative learning is effective'[56]. He cites a range of research evidence that highlights the positive effects of peer learning on motivation, problem solving and achievement. In this context, feedback from peers is particularly powerful and good planning and teaching will create structured contexts for that to take place constructively.

[55] OECD (2013) *Innovative Learning Environments* Educational Research and Innovation, OECD Publishing

[56] Hattie, J (2009) *Visible Learning: A Synthesis of Over 800 Meta-analyses Relating to Achievement* Routledge

Recommendations

32. All teaching and learning should be directed to achieving the four curriculum purposes.

33. Teachers should apply the pedagogical principles identified in this report when planning their teaching and learning, to ensure that the activities relate directly to the curriculum purposes.

34. Children and young people should have opportunities to learn from expertise and experience from outside the school.

Sound pedagogy will be an integral part of the successful implementation of the Review's proposals on curriculum and assessment. It means much more than the implementation of a pre-determined repertoire of methods and requires high-quality teachers with a sound understanding of the 'why' and 'how' of teaching as well as the 'what'. The implications for the formation and subsequent growth of teachers as reflective practitioners are considerable. The implementation of the Review's proposals, therefore, will be intimately associated with the Welsh Government's New Deal for the Education Workforce and wider questions of teacher education being taken forward by Professor John Furlong.

Chapter 6: Assessment

The Review was asked to address both the curriculum and the assessment arrangements in Wales, in recognition both of the vital role of assessment in children and young people's learning and of weaknesses in the current assessment arrangements. This chapter considers the evidence about the efficacy of current arrangements and what needs to happen to improve assessment. It also considers the implications for assessment of the proposed purposes and structure of the curriculum, taking account of the pedagogical principles for pedagogy outlined in the previous chapter.

Current arrangements

Developments in education policy in Wales have seen major changes to both assessment and accountability arrangements in recent years. The Welsh Government has shown consistent support for the kind of assessment for learning approach referred to in the previous chapter[57]. Following the publication of *Learning Pathways through statutory assessment: Key Stages 2 and 3*[58], Wales gave teachers the main responsibility for pupil assessment up to the end of Key Stage 3. Judgements are made on a 'best-fit' basis in relation to defined levels. Guidance has been provided to support teachers in making such judgements. Results are published and are also gathered centrally by the Welsh Government which then uses them for a variety of monitoring and informational purposes. More recently, children and young people's progress in reading and numeracy has been tested annually from Years 2 to 9 and teachers also assess children and young people's progress in meeting expectations in the LNF. The Welsh Government does not publish league tables of school performance.

The Welsh Government has acknowledged weaknesses in its assessment framework and that assessment for learning approaches are not well understood and embedded[59]. Its educational improvement plan recognises that there is a need to provide the kind of high-quality feedback that comes from good formative assessment – assessment for the purpose of informing the next steps in teaching and learning by identifying whether children and young people are progressing as intended – if the achievements of children and young people in Wales are to improve.

Concern about the assessment of children and young people's learning was reflected in the recent OECD[60] report on Welsh education that identified the

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[57] Welsh Government (2010) *Making the Most of Assessment 7–14* Welsh Government

[58] Daugherty et al. (2004) *Learning Pathways through statutory assessment: Key Stages 2 and 3* Crown Copyright

[59] Welsh Government (2014) *Qualified for life: An education improvement plan for 3 to 19-year-olds in Wales* Welsh Government

[60] OECD (2014) *Improving Schools in Wales: An OECD Perspective* OECD Paris

need to '...Ensure that student assessments support learning for all and align to national objectives'. The HMCI annual report for 2012–2013 indicates that the most common recommendation in inspection reports is about the need to improve teacher assessment, with nearly 40 per cent of schools inspected having this as a significant area for improvement. Even in schools with good inspection outcomes overall, assessment is frequently identified as a shortcoming. Similarly, the *Curriculum for Wales: Consultation on proposals for revised curriculum and assessment arrangements for Wales – Phase 1: Literacy, numeracy and wider skills* (2013) suggested strongly that assessment arrangements were confusing and no longer fit for purpose.

The evidence gathered for this Review supports these conclusions. Dissatisfaction with current assessment arrangements was one of the strongest messages we received. For example, the report on our call for evidence highlighted in relation to one aspect of assessment that the National Reading and Numeracy Tests express results as standardised scores, Foundation Phase uses outcomes, Key Stage 2 and Key Stage 3 use levels, and Key Stage 4 measures attainment using grades. Some of the statutory assessment requirements take place at the end of a phase or key stage, while others are annual. At Key Stage 4 there are no statutory assessment arrangements, but schools are still required to report progress to parents and carers. There is a need to establish a coherent and consistent approach to assessment in Wales[61].

The Welsh Government is currently undertaking a consultation on proposals for improving teacher assessment which, taken with the recommendations in this report, should make an important contribution to improving the validity and reliability of teacher assessment in Wales.

What needs to happen?

Evidence gathered in the course of the Review points to a number of requirements for change in order to improve assessment in Welsh education, to address current weaknesses and to ensure that the assessment arrangements support the purposes of education.

Assessment arrangements should:

- align assessment with the purposes of learning: assess what matters
- be clear about the reasons for assessment and plan in advance for the intended uses of assessment results
- promote the use of a wide range of techniques that are appropriate to their purpose
- engage students in their own assessment
- ensure that reports to parents and carers focus on progress
- be as light-touch as possible and avoid unnecessary bureaucracy

[61] Wales Institute of Social and Economic Research, Data and Methods (WISERD) (2015) *Successful Futures: Analysis of questionnaire responses – Final Report* Welsh Government

- use assessment evidence systematically and in combination with other evidence to inform school self-evaluation
- address the implications of good assessment practice for teacher capacity
- form a coherent, agreed assessment and evaluation framework with a clear vision and strategy based on all of the above.

Each of these elements is explored in turn in the following.

1. Align assessment with the purposes of learning: assess what matters

The validity of any assessment rests on its relationship to the purposes and intended outcomes of the teaching and learning process. The challenge is to establish a clear line of sight from the overall purposes of the curriculum as a whole through to learning intentions in the classroom on a day-to-day basis.

The existing national curriculum has no explicit overall guiding purposes and its organisation into subjects and levels (beyond the Foundation Phase) has tended to compromise the validity of assessment. Learning in each subject is described differently and a best-fit approach to the assessment of levels opens up wide disparities in the weightings given to different aspects of children and young people's achievement. Best-fit provides only limited information about actual achievement as a strong performance in one aspect of a subject may mask a weaker performance elsewhere.

The Review proposals are designed to strengthen the relationship between overall purpose, curriculum and lesson planning, and assessment, and to encourage a focus on progression. A fundamental Review principle is that the curriculum structure and associated assessment arrangements should give expression to the four overall curriculum purposes. This is achieved using the six Areas of Learning and Experience as vehicles for organising relevant knowledge, skills and dispositions. The Achievement Outcomes at each of the five proposed Progression Steps are similarly defined with reference to the four curriculum purposes. The clear purposes, smaller set of curriculum organisers and defined Progression Steps will provide a more coherent basis for learning, teaching and also assessment.

Many of the most worthwhile intentions for children and young people's learning will be difficult to assess. Assessment must provide relevant and proportionate information about progress and success in relation to all the intended outcomes. Overemphasis on a small range of outcomes (especially when they are linked to high-stakes assessment) risks narrowing the curriculum and there is evidence that this is the case in significant numbers of schools in Wales. The validity of assessment derives from what it says about learning in relation to the purposes of the learning. It is important to stress, however, that the extent of the assessment should always be proportionate to its benefits.

Recommendations

35. Assessment arrangements should ensure that all important learning intentions and progression in relation to the four curriculum purposes are covered by relevant and proportionate assessment.

36. Assessment arrangements should be based upon the intentions set out in the Achievement Outcomes at each Progression Step within each Area of Learning and Experience.

2. Be clear about the reasons for assessment and plan in advance for the intended uses of assessment results

Assessment requires careful advance planning. Such a statement may appear obvious at first sight, but in practice assessment is often informal and may only be considered formally towards the end of a sequence of teaching, often in the form of a test or assignment for reporting purposes.

Dylan Wiliam describes assessment as the bridge between teaching and learning[62]. There is no automatic relationship between what is taught and what is learned and we can only find out what actual learning has taken place through sound assessment. The evidence from those assessments can be used formatively to determine what the next steps should be or summatively to give an account of what has been learned. The same assessment evidence can be used for either purpose – it is not the means of assessment but the use made of assessment data that distinguishes one from the other. It is important to be clear about those uses from the outset and to build assessment into the teaching and learning process.

Formative assessment should be an essential and natural part of the teaching process and not an additional 'bolt-on'. The characteristics of effective formative assessment are outlined in the work of Paul Black and Dylan Wiliam[63] and are also clearly set out in documents such as The Assessment Reform Group's principles of assessment for learning[64] or, more recently, the Welsh Government's *How to develop thinking and assessment for learning in the classroom* (2010)[65]. They include: planning effectively; having clear purposes; understanding the factors influencing learning; making flexible use of different techniques; seeing assessment as an ongoing and constructive part of classroom practice; sharing assessment criteria; early identification of difficulties in learning; giving effective and timely feedback and support to students that focuses on improving learning; and promoting self- and peer assessment.

The characteristics of good-quality summative assessment are similar but with a stronger focus on assessing the cumulative nature of what has been learned at appropriate points in a course or series of lessons. Summative assessment

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[62] Wiliam, D (2011) *Embedded Formative Assessment* Solution Tree Press

[63] Black, PJ and Wiliam, D (1998) *Inside the Black Box: Raising Standards through classroom assessment* Granada Learning

[64] Assessment Reform Group (2002) *Assessment for Learning: 10 principles* Assessment Reform Group

[65] Welsh Government (2010) *How to develop thinking and assessment for learning in the classroom* Welsh Government

may require children and young people to draw together different aspects of what they have learned over a period of time. There is likely to be a greater emphasis on recording procedures that enable teachers to keep track of each child and young person's learning, without feeling obliged to record everything. It may be more important in summative assessment to minimise the variations in the standards applied by different teachers and also the possibility of biased judgements. It is also important that schools act in a planned, considered way on the summative assessments received from teachers and communicate information about progress to parents and carers appropriately[66].

The OECD report points out that 'In all student assessment systems, there is a need for clear external reference points in terms of expected levels of student performance at different levels of education'[67]. The Achievement Outcomes for each Progression Step will provide the context for planning and assessment to which the OECD refers and are intended as long-term reference points. They have been set deliberately at three-yearly intervals so as to allow teachers to plan and assess learning without constant reference to externally determined criteria.

A further use of assessment information, beyond formative and summative purposes, is for accountability and external monitoring of progress. A major OECD report on evaluation and assessment cautions that '...high-stakes uses of evaluation and assessment results might lead to distortions in the education process...', and that '...it is important to design the accountability uses of evaluation and assessment results in such a way these undesirable effects are minimised'[68].

The Review supports the analysis and conclusions of the OECD report. The implications for accountability will be discussed in Chapter 7 but it is important to confirm here that the prime purpose for assessment should be to provide information that can guide decisions about how best to progress children and young people's learning and to report to their parents and carers on that progress. By so doing, assessment should improve children and young people's learning, teachers' teaching and parents' and carers' understanding.

Recommendation

37. Assessment arrangements should give priority to their formative role in teaching and learning.

3. Promote the use of a wide range of techniques that are appropriate to their purpose

If assessment is to be applied to all the curriculum purposes, across a very wide range of skills, knowledge and disposition, it follows that teachers will need to use a wide repertoire of assessment techniques matched to the different outcomes. Any learning activity can and should be observed to determine whether or not the desired learning has taken place.

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[66] Teaching and Learning Research Programme and the Assessment Reform Group (2009) *Assessment in schools: Fit for purpose? A Commentary by the Teaching and Learning Research Programme* TLRP

[67] OECD (2013) *Synergies for Better Learning: An International Perspective on Evaluation and Assessment* OECD

[68] ibid. OECD (2013)

The *Making the most of assessment 7–14*[69] document sets out some useful principles for effective assessment. In particular, assessment information needs to be valid (that is, is it actually assessing what it purports to assess?), reliable (it would produce the same results when applied with similar groups of children and young people), manageable and meaningful for all – that is for children and young people, teachers, parents, carers and other audiences. It goes on to say that school assessment systems should incorporate and use information in different forms, and that the system should recognise that different audiences have different information needs. Effective systems use qualitative information, such as commentaries from teachers and children and young people, and quantitative information, such as outcomes, grades, levels and that derived from tests. It also notes that the information from assessment activities helps to provide a shared language for discussing progress and improvement.

Much of what is required for assessment can be gathered using familiar techniques and approaches: probing, open oral and written questioning that is designed to test understanding and to guide the next steps in learning; well-judged individual and group tasks; assignments; quizzes; tests; essays; projects, etc. More imaginative approaches include performance-related assessments involving, for example, role play, practical experiments, presentations, portfolios, etc. The scope to use digital recording more widely, for example drawing on current practice in special schools to show successful completion of learning targets, should be explored.

Teacher assessment has the potential to have high validity because it can cover the full breadth of the intended learning, can relate to and be embedded in coursework and can take place on a regular or even continuous basis. However, that validity is highly dependent on the teacher's capacity to design assessments that reflect the learning goals and that can be a complex and time-consuming task. As a result teacher assessments can fall short in reflecting the breadth and purposes of learning, particularly in doing justice to more complex knowledge and skills. Teachers are therefore likely to need support, through both professional development and exemplars, if the full contribution of assessment is to be realised.

In some aspects of assessment – notably when the results from different classes or schools are brought together or compared, for example for school improvement purposes – reliability assumes greater importance. Teachers may apply different marking standards, and there may be variations in performance conditions and unconscious bias, and so there can be an issue with the reliability of such assessments. Where necessary, this can be addressed though teachers working

[69] Welsh Government (2010) *Making the Most of Assessment 7–14* Welsh Government

together to agree standards and moderate the results. However, where assessment is for learning rather than reporting, issues of reliability are of less importance.

Testing, both multiple-choice and open-response, is an important element in the repertoire of assessment techniques. Regular classroom testing is a long-established feature of teaching and learning. The construction of tests that do more than focus on recall and simple application is, however, both complex and time-consuming. Care must be taken to ensure that, where it is appropriate, tests cover the breadth of intended learning and that they are seen as only one of a number of ways of informing the teaching and learning process. Too often tests are invested with an authority that does not reflect their limited contribution to assessing what matters.

External, standardised testing has the merit of high reliability but may have only limited validity in its relationship to the breadth of intended learning. As indicated earlier, every child and young person currently undertakes National Reading and Numeracy Tests every year from Year 2 to Year 9. Many of those who engaged with the Review saw the tests as a useful complement to teacher assessment that could provide benchmarks to support teaching and learning. However, teachers of younger children in particular felt that their usefulness was limited and did not necessarily merit the disruption to teaching and learning, and in some cases the levels of anxiety, which they generated. In addition, the OECD report[70] raised the issue that Wales is the only country that conducts national tests of this nature on an annual basis. As discussed later in this report, there is scope to revise the current arrangements to reduce the negative impact of these tests while retaining their useful functions.

Internationally, there are interesting developments in testing. Adaptive testing adjusts the difficulty in a sequence of questions to take account of the pattern of responses. Thus a sequence of correct answers would lead to a more complex track while those having difficulty would be directed down a less complex route. The start-up costs of such an approach can be considerable and they pose technical challenges in determining relative levels of question difficulty with any precision, but it would be important to explore the potential to use this approach. Advances in digital technology, drawing partly on computer gaming techniques, are opening up fresh possibilities for more interactive assessment. Simulations, for example, can allow quite sophisticated assessment of complex learning. Denmark has been using adaptive testing for a number of years and the Netherlands and Northern Ireland are also exploring its possibilities.

The Review's recommended focus, through curriculum purposes, on a wide range of skills, competences, knowledge and dispositions will inevitably pose challenges for assessment. Developments in a range of countries are important indicators of how such broader competences might be assessed[71]. Australia's online diagnostic tool, New Zealand's National Educational Monitoring Project, Finland's 'learning to learn' programme, France's Personal Competency Booklet and the Flemish Community of Belgium's non-cognitive learning tools are a few of such examples. In different ways, they are all seeking to create assessment tools and techniques that extend the range of competences that can be validly and reliably assessed.

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[70] OECD (2014) *Improving Schools in Wales: An OECD Perspective* OECD Paris

[71] ibid. OECD (2014)

Recent developments in Singapore are particularly relevant to the Review's proposals. Singapore, a high performer on PISA tests, wants to strengthen the focus of its curriculum and assessment arrangements on creativity and problem solving. The focus is on integrative tasks requiring knowledge and skills from different subject domains. Students must work collaboratively and make written reports and oral presentations. Assessment relates to both process and product and is carried out by classroom teachers against centrally specified criteria. Evaluations of the success of this work are mixed, however, with strong messages about the importance of effective and sustained professional development[72].

Recommendations

38. A wide range of assessment techniques, selected on 'fit-for-purpose' criteria, should be used to reflect the breadth of the curriculum purposes.

39. Teacher assessment, which allows a wide range of learning to be covered, should remain as the main vehicle for assessment before qualifications.

40. Where the results of assessment are to be used for purposes of comparison, issues of reliability in teacher assessment should be addressed through effective moderation; where the prime purpose of assessment is assessment for learning there is less of a need for reliability between schools.

41. Teachers should use tests as an important part of overall assessment arrangements but the limitations of such tests in covering the full range of desired learning should be recognised.

42. External, standardised testing provides important benchmarking information and should be used in combination with school tests and teacher assessment. Its frequency should be kept to a minimum in view of its impact on the curriculum and teaching and learning.

43. Innovative approaches to assessment, including interactive approaches, should be developed drawing on the increasing potential contribution of digital technology.

4. Engage students in the assessment process through both self-assessment and peer assessment

If children and young people are to develop the capacity to learn throughout life, they need to be able to reflect and diagnose their own progress and further learning needs. That means developing the skills of self-assessment and the disposition to deploy and act on those skills. Self-assessment is therefore an important way of helping children and young people to take more responsibility for their own learning. By reflecting on their understanding and performance in relation to clear criteria, they can identify areas of difficulty that might not be easily seen by an external observer. Children and young people can also introduce additional evidence of performance in relation to the four broad curriculum purposes that can provide a more rounded picture of progress.

[72] OECD (2014) *Improving Schools in Wales: An OECD Perspective* OECD Paris

Peer assessment involves children and young people assessing one another's work in pairs or in groups. Thinking about the performance of others can be an important learning experience for the person undertaking the assessment as it requires a depth of understanding of the nature of the learning itself in order to make such evaluations. The approach may also elicit different kinds of response, reflecting the more relaxed nature of the context and the likely greater familiarity with the language used for questioning.

The proposed form of the Achievement Outcomes that are written in 'I can...' and 'I have...' format lends itself to being adapted to a language that children and young people can understand and could, for example, be extended to include their own 'I now need to...' contributions. They should also provide longer-term learning objectives that can be shared with children and young people, and success criteria to guide self-assessment and peer assessment.

There is also significant scope for exploring the role that children and young people might play in the process of reporting to their parents or carers: with that intended audience, children and young people can outline their achievements and difficulties and identify what they intend to do next.

Recommendations

44. Both self-assessment and peer assessment should be developed as ways of encouraging children and young people to take greater responsibility for their own learning.

45. Reporting to parents and carers on progress in learning should include contributions from their children in relation to their own achievements and aspirations.

5. Ensure that records of achievement and reporting focus on progress against important learning goals, including the four broad curriculum purposes

In addition to the ongoing assessment which takes place as part of the normal classroom routine, children and young people and parents and carers need to be given more summative views of their progress, achievements and next steps when appropriate.

Parents and carers need regular information to find out how well their children are doing and show how they can support them in improving their learning. The Achievement Outcomes and Progression Steps will provide the context for this reporting, and reports should include an evaluation of children's achievements and progress for each Area of Learning and Experience and Cross-curriculum Responsibility, as well as what they need to do next to progress further. Reports should also include more holistic evidence of how children are developing towards the purposes, drawing on relevant achievements not directly arising from classroom learning. Increasingly, the use of digital media can allow more frequent feedback and also has the benefit of encouraging parents and carers to become more directly engaged with their children's learning.

Cumulative records of each child or young person's achievements can encourage a continuing focus on progress in learning and also allow wider achievements relating to the curriculum purposes to be captured and highlighted. Personal e-portfolios and 'e-badges' that mark notable achievements can be built up as they move through the system and can provide such a record. Such portfolios can be developed and 'owned' by the children and young people themselves, and can contribute to developing their digital competence. They could contain information about any test outcomes, progression in relation to each Area of Learning and Experience and Cross-curriculum Responsibility, statements about progress towards the four purposes, extra-curricular achievements and so on.

Teachers need to have straightforward ways of tracking individual children and young people's progress in ways that show progress over time and across the curriculum, including information from assessments that draw together different aspects of what children and young people have learned over a period of time and where they are asked to apply what they have learned to new contexts.

At major transitions, for example between infant and junior schools and primary and secondary schools, there needs to be more face-to-face discussion between teachers and with individuals about their strengths and weaknesses, and less reliance on simply transferring data. The progress of all children and young people needs to be considered at these transition points, not only those who need additional support. The proposed portfolio could play a key role in underpinning and facilitating these discussions.

Recommendations

46. Summative reporting to parents and carers should include holistic assessments of achievement in relation to the curriculum purposes, drawing on experience from beyond the formal classroom.

47. Children and young people should develop their own e-portfolio, possibly including 'e-badges', to record key achievements and experiences.

48. Summative reporting at key transition points should be supported by portfolio evidence and face-to-face discussions involving the relevant teaching staff.

49. Increased use of digital media should be explored to help to improve the immediacy of feedback to parents and carers and engage them more directly in supporting learning.

6. Be as light-touch as possible and avoid unnecessary bureaucracy

Much teacher assessment does not take additional time, because it consists of observation and the ongoing dialogue within the classroom. Other aspects do require careful planning, time for children to undertake the assessments, marking, feedback and recording. In arriving at plans for assessment a balance needs to be struck between the more informal, ongoing forms of assessment and more formal assessment activities. Over-elaborate arrangements for assessment eat into teachers' and children and young people's time. Judgement about what aspects of learning should be formally assessed and to what extent, what needs to be recorded and in what level of detail, and how much assessment information is sufficient to be able to gauge progress in learning, will therefore be very important.

Recommendation

50. Local and national policies and practices for assessment should be carefully designed to be as light-touch as possible, while giving sufficient information to assess progress, and avoid unnecessary bureaucracy.

7. Use assessment evidence systematically and in combination with other evidence to inform school self-evaluation

School self-evaluation should make a vital contribution to raising the quality of education and standards of achievement. Teachers and leaders at all levels need regular information from the assessment recording system to track the progress of individuals and groups of children and young people. This should have as its prime purpose the identification of any particular successes and challenges within the school as a whole, but it will also be a valuable source of evidence for

evaluating the impact of teaching, the curriculum, leadership and management. Leaders and governors need this information to inform their evaluations of the progress of the school and to set future priorities for improvement.

Together with other sources of evidence such as observations of classroom activities and performance data, Progression Steps and their Achievement Outcomes can be used to develop a picture about the strengths and weaknesses of the school.

In addition, there is a requirement for assessment information that can inform monitoring of national performance. This aspect is addressed in Chapter 7.

Recommendation

51. Schools should use teacher assessment of progression systematically, together with other sources of evidence, to inform their self-evaluation for school improvement purposes.

8. Take full account of the implications of good assessment practice for teacher capacity

The ability to assess learning, particularly the application of complex learning, places heavy demands on teachers' professional skills. Yet assessment is rarely the focus of sustained professional development, either in initial teacher education or in subsequent career-long learning. Effective teaching and learning requires a deep and secure understanding of the curriculum and of the roles of both formative and summative assessment together with the skills associated with designing and interpreting the wide range of techniques that good assessment demands.

The review of teacher education currently being undertaken by Professor John Furlong provides an important opportunity to address the significant implications of assessment practice for teachers' professional skills.

Recommendation

52. Initial and career-long professional learning programmes should include elements that build teachers' capacity to assess the full range of curriculum purposes and Achievement Outcomes.

9. Form a coherent, agreed assessment and evaluation framework with a clear vision and strategy

The need for a nationally agreed assessment and evaluation framework is one of the key policy recommendations of the major international review of assessment and evaluation undertaken by the OECD[73]. The absence of such a framework in Wales has contributed to the confusion surrounding existing approaches.

[73] OECD (2013) *Synergies for Better Learning: An International Perspective on Evaluation and Assessment* OECD

In line with the wider Review proposals, the framework should '...aim to align curriculum, teaching and assessment around key learning goals and include a range of different assessment approaches and formats...'[74]. It should be clear about the formative and summative roles of assessment and distinguish between those activities whose place lies in learning and teaching and those that will contribute to self-evaluation, external accountability and national monitoring. In particular, it should explain how the components of the assessment framework address issues of validity and reliability in the methods used.

Recommendation

53. The Welsh Government should establish a comprehensive assessment and evaluation framework in line with the recommendations of this report.

[74] OECD (2013) *Synergies for Better Learning: An International Perspective on Evaluation and Assessment* OECD

Chapter 7: Implications

This chapter considers in more detail some of the implications of the Review's recommendations for subsequent implementation.

Implications for nursery, primary and secondary schools

The recommended changes to curriculum and assessment made by the Review provide a new way of thinking about the education of children and young people throughout the period of schooling. They present primary and secondary schools jointly with greater scope to plan and provide a curriculum and an approach to assessment that builds progressively from ages 3–16. They offer teachers fresh opportunities to provide interesting and challenging learning experiences for their children and young people. Additionally, if embedded effectively, they will provide children and young people with a deeper, more satisfying and relevant educational experience and wider recognition of their achievements.

Some of the possibilities offered by the new arrangements are illustrated below.

Nursery and primary

Nursery and primary school leaders identified the ethos, principles and pedagogy of the current Foundation Phase as a significant strength of current educational practice in Wales. A curriculum based on Areas of Learning and Experience instead of subjects will enable schools to build on successful 'Foundation' practice into the middle and later years of primary education and beyond. A few schools have already extended the 'Foundation' philosophy and pedagogy into the 7–11 age range in this way. Often they have found it successful in increasing children and young people's engagement and removing the subject barriers that are often seen as inhibitors to creativity and flexibility in the curriculum.

In schools and settings where 'Foundation' practice is good or excellent and teachers and practitioners think and plan creatively to enable all children to experience all aspects of the current Foundation Phase Areas of Learning over time, the new curriculum may not feel significantly different. Naturally, planning will need to take into account the new Areas of Learning and Experience in place of the current Areas of Learning, but in successful settings and schools there should not be a need for a huge shift in thinking or practice. However, evidence from recent evaluations suggests that there is still some way to go to establish high-quality 'Foundation' philosophy and practice and necessary improvements in children's learning in all schools.

There are likely to be more changes for teachers in the 7–11 age range (currently called Key Stage 2). Instead of feeling pressured to cover all subjects of the curriculum every week and doing so inadequately, as many teachers say they do, they will be able to think more flexibly and creatively about planning learning experiences for their children and young people. With less specific content,

children and young people will be entitled to encounter a range of learning and experiences in each area that builds up to a broad, balanced curriculum over time. Schools and teachers can choose to organise learning in whichever way is likely to result in the best outcomes and standards for their children and young people. This may include learning through topics, projects, thematic or research weeks, special events, considering and researching big questions.

Changes to assessment and accountability should reinforce this new sense of direction. Teachers can confidently use assessment to promote progression in each child's learning, diagnosing difficulties and indicating what the next steps should be. Testing should be the servant and not the master in this process. Peer moderation will help improve reliability but, equally importantly, will provide opportunities for professional discussion about expectations and about how to assess the most important aspects of learning.

Importantly, teachers should never feel constrained to work only within individual Areas of Learning and Experience. Rather, they should feel more able to make genuine connections between Areas, using the Progression Steps and Achievement Outcomes as a compass that will allow them to maintain continuity and secure progression in each child's learning.

For children and young people, the new arrangements will help to ensure that they experience the full benefits of primary education. The curriculum purposes will help ensure that they are developing as well-rounded individuals with strong literacy and numeracy skills and the ability to acquire and deploy digital competences in creative settings. Their Welsh language skills will develop progressively as they move through primary. They will feel confident about themselves and know how to stay healthy and safe. They will be encouraged to engage directly in shaping their own learning, providing examples of achievements that they feel proud of.

The study of a local river, for example, may be rooted in the Humanities Area of Learning and Experience. However, it opens up wide-ranging opportunities across other areas. It might connect with the Expressive arts Area of Learning and Experience through listening to music, such as Smetana's *Vltava*, and composing music or creating visual interpretations or dance or dramatic performances to express the river's journey from its source to the sea. It offers opportunities to use factual and creative language purposefully to create brochures or poems and to apply mathematical and scientific skills to observe and investigate natural phenomena and measure depth and speed. It enables children and young people to improve their health and well-being by appreciating the joy of fresh air and walking safely in the hills to seek the source of their local stream and using map skills to follow all or part of its journey.

None of this is new. It is what the most successful schools and practitioners in Wales have been doing effectively for many years. Such good practice, however, often seemed to take place despite and not because of curriculum and assessment requirements. A new focus and a different way of organising and thinking about the curriculum through Areas of Learning and Experience and Progression Steps is intended to reinvigorate education and make learning exciting and relevant for children and young people and teachers.

Secondary

For school leaders, the new arrangements will provide greater freedom to plan and provide a more relevant curriculum that will raise standards and meet their young people's needs within a reduced, more coherent and consistent framework of national expectations. The new arrangements do not represent a recommended timetable structure and schools can work imaginatively to organise the school day, week and year in ways that will ensure breadth and progression in each young person's learning while avoiding the fragmentation that can arise from an exclusively subject-based timetable. The expectation to raise standards will remain but performance measures will be tailored to the new arrangements and reinforce the need to plan a curriculum that meets the four curriculum purposes.

The curriculum in the early years of secondary should be designed in ways that fulfil the expectations of the very many young people who are excited by the move up from primary only to become disillusioned with a curriculum that often lacks conviction and integrity. These years should be a stimulating

culmination of progression in learning that began in 'Foundation', now reinforced and extended by exposure to specialist subject teaching. These years should be used to build the knowledge and skills that will underpin future qualifications but that does not mean that these years should be seen as a 'waiting room' for these qualifications or that courses should be designed based on anticipated examination requirements. The new Welsh Baccalaureate, with its focus on skills and 'challenges', already has implications for the secondary curriculum more generally. The new curriculum structure encourages development of these elements of the 'Bac' across the Areas of Learning and Experience and throughout secondary education. In that way the Review proposals should provide a better platform for performance in qualifications.

For teachers, much of the existing complexity will be reduced. Guidance will now be all in one place and expectations relating to literacy, numeracy, digital competence and wider skills will be embedded and not require to be planned for separately. The curriculum purposes will provide consistent points of reference for decisions about how learning might best be organised and assessed. Together with the proposals on structure and assessment, they signal the importance of sustaining challenge and depth in learning and of applying what is being learned across the curriculum. Teaching and learning approaches will be less constrained by detailed prescription and narrow performance measures.

The Review proposals will allow teachers much greater scope to use assessment as a constructive and integral part of teaching and learning. They reaffirm the importance of teacher assessment but suggest ways in which the distorting effects of making such assessments too 'high-stakes' can be avoided. One of the challenges for secondary teachers will lie in developing the skills needed to assess the kind of deep and applied learning that the Review recommends. The importance of working together both within and across schools will be an important part of developing such expertise.

The proposed Areas of Learning and Experience include both subject and instrumental learning. The Progression Steps provide clear milestones in learning without constraining day-to-day decisions about teaching and learning. The best planning is likely to take place in collaboration, with teachers working together to address the requirements of the Achievement Outcomes, to plan team-teaching opportunities and to identify and develop resources.

For young people, the new arrangements will provide an education that is directed towards curriculum purposes that are designed to equip them for future life and work. They will experience a broad and challenging curriculum within which their skills in literacy, numeracy and digital competence will be developed consistently. They will engage with Welsh culture across the curriculum and develop their Welsh language skills to at least a functional standard. They will be encouraged to be creative and to have high aspirations. They will be supported to help them meet those aspirations with no artificial ceilings placed on their progress. That progress will be recognised in different ways, including through portfolios that contain examples of achievements relating to the curriculum purposes from beyond the formal curriculum.

For example, a school could provide a Year 7 programme for a significant part of the school week that develops a wide range of skills through a themed approach, thereby aiding continuity with primary practice. This approach could involve a series of projects to cover the year, and use the thinking skills methodology of 'plan, develop and reflect' as the organising structure. Projects would cover all subjects, although specialist teaching could be provided for literacy, numeracy and areas such as modern foreign languages and PE. The projects could be based on a range of interesting topics that develop different skills and subject areas, for example on topics such as 'sustainability' and 'innovation'. Teams of staff drawn from all subjects would design and deliver the curriculum, while timetabling based on multiple lessons would allow both the flexibility to create larger or smaller teaching groups as well as team teaching.

All of this will ultimately depend on what happens in classrooms day by day. The problem of sustaining the motivation of young people, particularly in the early years of secondary, is a feature of schools across the United Kingdom and beyond. The proposed changes to curriculum and assessment cannot solve this problem but they are intended to provide schools and teachers with greater freedom to create approaches to teaching and learning that will better meet the needs and aspirations of their children and young people.

Implications for children and young people with additional learning needs

This Review presents a curriculum and assessment framework for all children and young people in Wales wherever they receive their education. Special schools provide education for a wide range of learning needs and much of their existing good practice, including in assessment, is already in harmony with the Review's proposals. The four identified purposes of the curriculum apply to all children and young people. Similarly, the Progression Steps and Achievement Outcomes should also be relevant to all children and young people and will provide opportunities for a rich range of experiences.

The programmes of learning currently on offer in special schools should be relatively easy to adapt to deliver a curriculum that comprises the six Areas of Learning and Experience, the three cross-cutting responsibilities and wider skills. As at present, they will need to design pedagogical approaches to match the specific learning needs of their individual children and young people. The curriculum will provide scope for creativity and innovation and it will be vitally important that teachers and learning support workers (classroom support staff) use this scope to develop and deliver programmes of learning that are relevant and meaningful to the children and young people in their schools.

Schools will be able to decide the most appropriate implementation strategies, taking account of their own circumstances. Parents, carers and children and young people will have key roles to play in the development of learning programmes, as is highlighted in the principles of the Review. Additionally,

multi-agency support will need to be integrated into all planning for children and young people who have the most complex learning needs.

All of these developments will require bespoke training to ensure that teachers and learning support workers have the skills and confidence to deliver the new curriculum. This should be seen as an important part of the New Deal for the Education Workforce.

The reform process

Throughout the course of this Review, one of the recurring issues was whether the mechanisms for implementing previous decisions about the curriculum had taken sufficient account of the capacity of schools and teachers to deliver well what was expected of them. The general feeling was that while the policy aspirations had been generally accepted as appropriate, insufficient account had often been taken of the complexities of implementation.

There is no single, best approach to effective educational reform. Research evidence paints a fairly unpromising picture of experiences of educational reform in different settings[75] [76] [77].

Change strategies are highly culture and context specific and there is a danger that a highly complex matter like the reform of education becomes reduced to oversimplified solutions that do not take sufficient account of the nature and complexity of education. What works in one country may well be inappropriate when applied elsewhere. The implementation of the Review's recommendations needs to learn the lessons from the limitations of past reform and adopt a change strategy that best meets the nature of the Welsh context and its educational culture.

Experience of major curriculum reform over many decades provides some positive as well as negative examples, and suggests that an effective change strategy should:

- have a governance structure that can maintain strategic oversight of implementation, is inclusive, has reliable evaluation and feedback mechanisms and allows clear and timely decision making
- ensure that the purposes and intended benefits of the proposed reform programme are communicated clearly and effectively
- establish engagement mechanisms designed to secure the active involvement of the teaching profession

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[75] Hoyle, E, and Wallace, M (2005) *Educational Leadership: Ambiguity, Professionals and Managerialism* Sage Publications

[76] Hattie, J (2009) *Visible Learning: A Synthesis of Over 800 Meta-analyses Relating to Achievement* Routledge

[77] Elmore, R F (2004) *School Reform from the Inside Out: Policy, Practice And Performance* Harvard Education Press

- secure the understanding and support of key stakeholder groups, particularly parents and carers
- set expectations about the pace of change that takes full account of the need to build the confidence and capacity of teachers and other practitioners, who will determine the ultimate success of the reform programme
- be agile and creative, using evidence to shape and adjust the programme as it develops
- be responsive – using evidence to balance those features that must be in place in all schools against the benefits of local ownership and responsiveness to particular needs and circumstances
- be supported by a strategic approach to developing capacity, including appropriate initial teacher education and continuing professional development
- establish necessary 'scaffolding', for example in the form of guidance, exemplar materials and other resources, to support implementation including the targeted development of resources for use during preparation and implementation
- establish accountability mechanisms that reinforce the purposes of reform and can evaluate and report on its impact
- establish independent evaluation mechanisms that can inform development and report on outcomes.

The proposals flowing from this Review are radical and fundamental, and imply deep and enduring change. The scale of the changes will take time to implement and this suggests that the changes should be carefully phased in as part of a comprehensive implementation plan.

Experience from elsewhere suggests a long-term plan – both Northern Ireland and Scotland have been engaged in their reform programmes for a decade. Building a robust basis of support across all stakeholders and political parties is key if Wales is to achieve the sort of sustained and sustainable approach to change necessary to underpin these proposals. The plan will need to take account of priorities for early implementation as, for example, in the case of the development of a digital competence framework and related developments in computer science. Even though there may be a process of staged implementation over a number of years, it is vital that the children and young people currently in schools are not forgotten and there is a need to make sure that their interests and needs are protected at all times.

There will need to be substantial training programmes and the provision of adequate time for teachers to prepare. Some of the proposals also have implications for how schools are organised and in particular how they structure

the curriculum, and again these will take time to plan and embed. One of the first tasks will be to elaborate the Areas of Learning and Experience, and that task is described below.

Recommendations

54. The revised curriculum and assessment arrangements should be introduced through an agile change strategy that establishes understanding and support, sets a measured pace, builds capacity and manages dependencies, particularly accountability arrangements.

55. Separate and independent evaluation arrangements should be established to monitor the effectiveness of the change structure and the new curriculum arrangements in relation to improvements in the quality of learning and performance.

Leadership and steering

Since 2006, when the Qualifications, Curriculum and Assessment Authority (ACCAC) was merged with the Department for Education, Lifelong Learning and Skills, responsibility for national curriculum development has been an entirely governmental responsibility. The advantages of streamlined decision making arising from such a merger are clear. However, the nature of the change in culture and approach implied by the Review's recommendations and the evidence about how best to embed reform point to the need for a broader and more inclusive approach.

The Review therefore proposes that, while Ministers should continue to have responsibility for setting the national direction, there is a case for securing greater, arms-length involvement in advising on that direction and in overseeing the implementation process itself. The precise mechanism for such an approach is not a matter for this Review.

Recommendation

56. The Welsh Government should establish an arms-length structure for day-to-day leadership and steering of curriculum and assessment arrangements.

Elaboration and development of Areas of Learning and Experience

Following agreement on the way ahead, one of the first priorities for development work will be to flesh out the basic curriculum structure outlined in this report, including the Areas of Learning and Experience.

The task of central development teams will be to create, for each Area of Learning and Experience, Outcome Statements for each Progression Step. These statements will express the desired learning, taking account of how children and young people will need to develop and progress in each Area of Learning and Experience and addressing appropriate aspects of the four purposes, Cross-curriculum Responsibilities and wider skills. The aim is to reduce the requirement for schools and teachers to engage in the complex task of balancing these various elements within the curriculum, and to allow them to focus on selecting relevant content and creating stimulating teaching and learning contexts and activities for their children and young people.

Among the elements to be taken forward by the central development teams for each Area of Learning and Experience there should be:

- a clear statement of how the Area of Learning and Experience promotes the four purposes of the curriculum
- a description of the scope and boundaries of the Area of Learning and Experience, including its central concerns, how it is distinct from other areas and why it is important for the education of each child and young person
- a decision about how best to present the various component subjects and/or strands within the Area of Learning and Experience
- advice on the incorporation of relevant elements of the Cwricwlwm Cymreig within the Area of Learning and Experience
- a description of development and progression within the Area of Learning and Experience, including reference to how *Routes for Learning* can be incorporated
- an outline of the desired Achievement Outcomes at each Progression Step in terms of knowledge, skills and experiences
- identification of ways in which key elements in the three Cross-curriculum Responsibilities of literacy, numeracy and digital competence, and the wider skills, can be promoted and taken forward
- an explanation of progression and the definition of achievement at the specified progression steps
- advice on teaching and learning strategies that are particular to the Area of Learning and Experience
- a description of how assessment should contribute to learning in that Area of Learning and Experience and advice, where appropriate, on how evidence might be gathered.

In some areas, notably literacy and numeracy and *Routes for Learning*, the team will need to revisit existing frameworks in the light of the new structure of Areas of Learning and Experience and Progression Steps.

Recommendation

57. Each Area of Learning and Experience should be elaborated in line with the brief provided in this report in order to provide practitioners with easily accessible guidance to help with their planning.

The complexity of the national development task should not be underestimated and marshalling and supporting central teams with the necessary experience and expertise will be essential.

Teaching and leadership capacity

The new curriculum and assessment arrangements will have significant implications for teaching and learning and therefore for the ways in which teachers' skills, and those of the wider workforce, are developed. In particular the cross-cutting digital competence responsibility, the enhanced focus on the Welsh language in pre-school/primary, and the greater emphasis on the use of the Welsh language in secondary will have wide implications for teaching. Other areas which are likely to have implications for professional development are the Health and well-being Area of Learning and Experience, computer science (in the Science and technology Area of Learning and Experience) and assessment.

If the proposals are to be successful, there needs to be an extensive, well-coordinated and sustained professional learning programme that involves all leaders, teachers and other practitioners. The programme should be scheduled carefully to coincide with the timescales for the introduction of new arrangements and should be matched to the particular needs of individual practitioners.

The New Deal for the Education Workforce and the associated National Model of Professional Learning currently being developed by the Welsh Government should make an important contribution to building necessary capacity. Similarly, the recommendations from Professor John Furlong on ways in which the system of teacher development can be improved further will form an important complement to the work of the Review.

Recommendations

58. An extensive and sustained programme of professional learning should be developed to ensure that the implications of the Review recommendations for the skills and knowledge of teachers and other practitioners are fully met.

59. The longer-term implications of the Review for building teacher capacity should be taken forward in the context of the Welsh Government's New Deal for the Education Workforce and Professor John Furlong's recommendations on teacher education.

The reforms will also pose challenges for leadership at all levels. Greater freedom will offer opportunities for creative decision making about the kind of curriculum that will best meet the needs of the children and young people in the school. Improving the quality of teaching and learning and ensuring consistent high quality will continue to be important. Inspiring, coaching and supporting staff in realising the new possibilities will be a critical task of leadership. Tests of success will be different, with new accountability measures and greater expectations of self-evaluation.

The likelihood of success will be enhanced by an increase of collaboration within and between schools, joint planning, sharing good practice and rigorous moderation of assessment. Skills associated with the ability to lead in a partnership arrangement, share resources and negotiate will be essential. And, critically, leaders will have to make sure that parents and carers understand, are convinced by and supportive of the new curriculum and assessment arrangements, and that their children will not be disadvantaged by the process of implementation.

Recommendation

60. Priority should be given to developing the leadership commitment, understanding and skills necessary for the proposed reforms to succeed.

System capacity

In addition to teachers and leaders, the implementation of the proposals will have implications for capacity in other players in the education system. These players include the Department for Education and Skills, Estyn, regional consortia and local authorities. All will have to learn about and fully understand the proposals, and the implications for schools, especially in terms of the impact it will have on schools as they adjust to the new arrangements. They will also have to appreciate fully the implications of the proposed new arrangements for local decision making and for accountability. At the heart of this is the need for all these agents to work together.

The Department for Education and Skills will not only have to develop the systems to evaluate the success of the country as a whole but it will also have to manage the implementation plan. It will also have to take through any necessary changes to legislation and to develop guidance for those aspects that are non-statutory. Regional consortia and local authorities will need to develop strategies to support their schools through the engagement and implementation and to introduce the accountability arrangements for individual schools that are proposed here. Estyn will need to adjust its inspection programme and possibly its approach to recognise and fit into the implementation phase. This may mean taking on more of a supportive role with schools in the early stages, while at the same time ensuring that schools are performing as well as they should. The development of new accountability arrangements will also have implications for the way Estyn works.

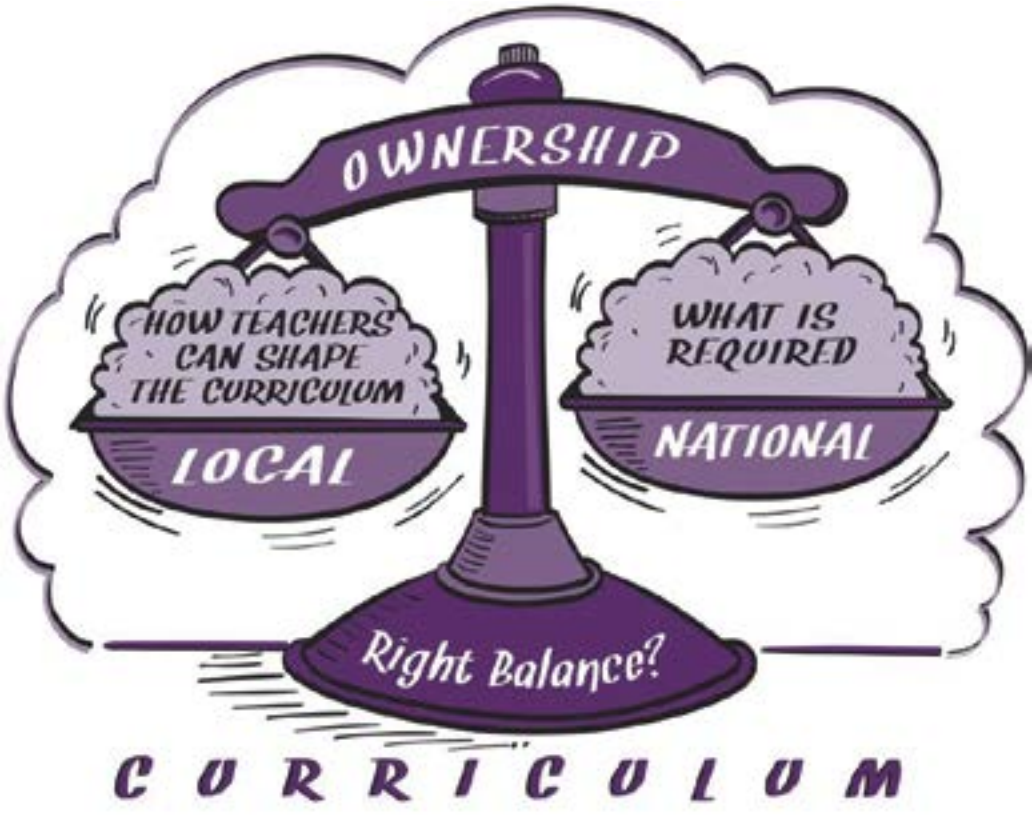
The proposals here will also generate a great deal of activity in developing enhanced and sometimes new approaches to research and evaluation. The Review has referred to the implications for capacity building, especially in improving formative assessment and devising new arrangements for accountability. Other high-performing countries have established specific research and support systems to help to coordinate and promote these types of developments in assessment practices and a similar mechanism should be considered in Wales.

Recommendation

61. The significant implications of the Review proposals for national and local educational infrastructure should be fully recognised. The Department for Education and Skills, regional consortia, Estyn, Qualifications Wales and universities will need to establish mechanisms for coordination and joint working that recognise the responsibilities and respective strengths of each.

National and local ownership

A recurring theme in the evidence presented to the Review was whether the current curriculum arrangements in Wales had achieved the right balance between what is required of schools at a national level through legislation, and the extent to which schools and teachers could shape the curriculum at a local level in light of the particular needs of their communities and their children and young people.



A key challenge for educational reform is to strike the right balance between central direction and local flexibility. A report by McKinsey and Company[78] that drew on an analysis of 20 education systems suggests that there are clusters of approaches that seem to be appropriate to different stages of educational development. Strong central direction, support and accountability mechanisms can be appropriate in raising the quality of relatively underdeveloped systems with limited professional capacity. However, if the aim is to create a high-performing system, approaches should focus less on central direction and more on the need to develop local responsibility and decision making, build capacity and engage teachers and schools more creatively in the improvement process.

The McKinsey analysis is helpful up to a point, but education systems inevitably include schools and teachers with varying experience, confidence and capacity; some will be ready to take full advantage of greater freedom while others will require a more extended period of continuing support. The challenge when arriving at the appropriate balance of central and local ownership is to create an approach that covers both ends of the spectrum of schools and teachers.

Charles Handy describes subsidiarity as '...the idea of reverse delegation – the delegation by the parts to the centre'. Subsidiarity means that power stays as close as possible to the action. Rather than relying on a set of rules, which suggest a lack of confidence and can breed corruption, subsidiarity is dependent on mutual trust and confidence which supports positive disagreement and argument. Subsidiarity is about ensuring that power is where it belongs – rather than about empowerment which involves someone in power giving something away[79].

In moving to a higher-performing education system, the message for Wales is for the Welsh government to set the direction and place trust in the vast majority of schools and teachers to follow that lead in ways that will serve their children and young people well. The CBI has called for greater freedom to innovate at school level, '...allowing teachers and headteachers to utilise their professional skills to drive improved outcomes'[80]. At the same time, however, there will remain a need to buttress this approach with appropriate legislation, inclusive leadership, support for capacity building, and constructive systems of accountability.

Recommendation

62. The change strategy associated with the Review should apply the principle of subsidiarity, encouraging local ownership and responsibility within a clear national framework of expectation and support.

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[78] Mourshed, M, Chijioke, C and Barber, M (2010) *How the world's most improved systems keep getting better* McKinsey and Company

[79] Handy, C (1995) *The Age of Paradox* Harvard Business School Press

[80] CBI (2014) *Step Change – A New Approach for Schools in Wales* CBI

Legislation

If the revised curriculum and assessment arrangements are to secure the direct involvement of schools and teachers in taking key decisions about both what and how to teach, then we need to be very clear about the level of detail to be included in legislation. In formulating its recommendations the Review has sought to strike a balance between enabling teachers to use their professionalism and creativity to respond to the needs of their own children and young people, and ensuring that those aspects of the curriculum deemed to be essential are given legislative force.

The case for the central role of aims and purposes in driving decisions about form content and assessment has been made in Chapter 3 of this report. There is therefore a strong argument that the four recommended curriculum purposes should be reflected in primary legislation – reinforcing the need for them to underpin all teaching and learning in schools. It is therefore proposed that a general duty be placed on schools to organise and deliver a curriculum for all children and young people that is designed to meet the four purposes of education. In line with national policy, specific duties may also be placed on schools in relation to the Welsh language and RE.

In order to ensure breadth, the primary legislative duty should encapsulate the notion of entitlement to receive education across all of the six Areas of Learning and Experience throughout the period of statutory education. It is further recommended that the duty should encapsulate the need to ensure that educational provision is designed to help all children and young people to move through the Progression Steps as specified in related national guidance.

To be clear, the Review is not recommending that the content of the Areas of Learning and Experience or the related Progression Steps be specified in primary legislation but that they should be set out in guidance. Such an arrangement will allow greater flexibility in adapting the curriculum over time and in light of evidence about its implementation.

It is the Review's intention that, by adopting a lighter touch in respect to legislation, schools and teachers would be encouraged to take significant responsibility for developing a curriculum which is consistent with national expectations, but which is also able to reflect the needs of the children and young people in their school.

Some schools and individual teachers will be better placed than others to adopt this approach. The Review therefore recommends that further detail of content, assessment arrangements and pedagogy should be set out in guidance and other forms of 'scaffolding' that could be used to support practice, particularly in the initial stages of implementation.

Recommendations

63. The principle of a national curriculum for Wales should be reaffirmed and legislation should define a broad set of duties rather than detailed prescription of content.

64. Where necessary, specific requirements in relation to curriculum and assessment should be described in regulation and guidance, and subject to regular review.

Accountability

In common with all areas of public service, education should be subject to and benefit from constructive and robust systems and methods of evaluation and accountability. Inevitably, the revised curriculum and assessment arrangements proposed in this Review will have implications for current approaches. In an environment where key decisions are taken at the local level, it is vital to strengthen and enhance accountability arrangements in ways that help to embed the new arrangements and drive improvement while avoiding the distorting effects that can arise from external performance and reporting requirements. It may be necessary to establish transitional accountability arrangements during the early stages of the implementation programme.

The OECD[81] sees a number of apparent strengths in the current accountability arrangements in Wales (called 'evaluation' in the report), for example through the existence of a national system at all levels, the focus on the achievements of children and young people, and the availability of comprehensive performance data. An additional strength of the system is that the performance data is set in context in that it compares performance with similar schools. The Review's proposals aim to build on these strengths.

The OECD report also identifies a number of weaknesses in current approaches to accountability. It concludes that the current arrangements lack coherence and that Wales has struggled to strike a balance between accountability and improvement, with scope for a greater emphasis on improvement in future. In creating a coherent framework, the OECD report recommends that assessment should support learning for all and that it should be aligned to national objectives. It also recommends that the school accountability process supports school improvement. The Review evidence strongly supports these conclusions of the OECD.

In addition to ensuring that schools and the nation as a whole are performing as well as they should, systems of national and local accountability should have a key aim of supporting the effective introduction of the revised curriculum and assessment arrangements and evaluating how well its intentions are being realised. These accountability systems should address the question 'How far is

[81] OECD (2014) *Improving Schools in Wales: An OECD Perspective* OECD Paris

the school developing all of its children and young people as: ambitious, capable learners; enterprising, creative individuals; ethical, informed citizens of Wales and the world; and healthy, confident individuals?' They should be designed to encourage schools to be creative in their planning of the revised curriculum and to minimise the risk of superficial change solely for reasons of compliance.

The new National School Categorisation System, which applies to all schools, provides a potentially helpful basis for helping to promote effective introduction of new curriculum and assessment arrangements. It should have a strong focus on the extent to which schools are establishing the revised curriculum arrangements in a way that is well designed and effectively implemented in relation to the agreed purposes of education. Clarity is needed about the use of assessment data for learning and its use for accountability. In particular, when teacher assessments are used explicitly for accountability, as at the end of the current Foundation Phase, Key Stage 2 and Key Stage 3, the reliability of the teacher assessments may be in doubt and there can also be serious perverse effects on the curriculum. The Review therefore proposes that teacher assessments should not be reported to the Welsh Government. Assessment data must, of course, inform broader evaluations of how well a school is serving its children and young people. However, assessment data should inform such judgements in ways that minimise known distorting tendencies. It should also not be the sole source of evidence for evaluation but should contribute to a broader evidence base, reducing its prominence and minimising possible distorting effects.

The Review proposals also have implications for local authorities, regional consortia and Estyn. For the foreseeable future, the regional consortia will have a vital role in monitoring the performance of individual schools and in identifying those schools that need additional support. The relationship should be more of a professional dialogue, expecting schools themselves to become better at self-evaluation and improvement planning. Even so, the process will still need to be robust as consortia discharge their responsibility to ensure children and young people in their area have a high-quality educational experience.

As well as information on the progress of their children, parents and carers need to have information about how well their child's school is performing. Information is currently available through the governors' annual report, school prospectus, the My Local School website, Estyn inspection reports and the new school categorisation system. As the Review proposes that teacher assessments are not to be reported to the Welsh Government, the nature of the performance information available to parents and carers will need to change. For secondary schools it will still be possible to provide performance information on external examinations at 16 and beyond, but for the earlier years in secondary schools or in primary schools there will need to be changes in how information is provided for parents and carers.

Although it is proposed that the Welsh Government should no longer gather school-level data about the performance of all children and young people, national monitoring of the performance of the system as a whole remains

important if policy is to be able to respond appropriately. The Review therefore proposes that national monitoring of achievement by the Welsh Government should be informed by a rolling programme of sample testing in, for example, literacy (English and Welsh), numeracy, digital competence and science and by reports from Estyn. Such sample assessments, which would only involve some children and young people, would not need to take place every year, and there could be a timetable of such assessments over a period of years with a single topic being assessed each year. Assessments of progress towards meeting the four purposes should be part of school inspections and also reported on by Estyn on a regular basis.

Recommendations

65. Accountability arrangements should be strengthened and enhanced in ways that help to embed the new arrangements and drive improvement.

66. Accountability arrangements, particularly inspection, should evaluate and encourage the successful embedding of the curriculum purposes in the day-to-day work of schools and ultimately the outcomes being achieved by children and young people.

67. The school categorisation system should, in due course, be adjusted to reflect the recommendations of this Review.

68. The Welsh Government should no longer gather information about children and young people's performance on a school-by-school basis but should monitor performance in key aspects of the curriculum through annual testing on a sampling basis.

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Chapter 8: Conclusions and Recommendations

This report is called *Successful Futures* because of the critical and enduring importance of education for the long-term success and well-being of each and every child and young person in Wales, and ultimately for the social, cultural and economic health of the country itself. The curriculum and associated assessment arrangements are the embodiment of the aspirations that Wales has for its children and young people and must therefore be designed and realised in ways that fully meet those aspirations. The school curriculum in Wales has evolved in scope and shape over the last 25 years as it has responded to both short- and long-term pressures. Assessment arrangements have similarly changed over time. The task of the Review was to examine the current arrangements, identify areas of strength that could be built upon and make proposals for necessary change.

The Review involved as many people in Wales in its work as possible. We were gratified by the large response to our call for evidence and the very open and constructive discussions we had in schools around the country and with individuals and representatives of organisations in Wales. The conclusions and recommendations contained in this report are therefore significantly influenced both by teachers in Wales and also, importantly, by children and young people themselves. In addition, the Review took account of the best of emerging trends and developments internationally.

The evidence gathered in the Review identified important strengths in the current arrangements in Wales, in particular, the commitment to equity and inclusion, the attention given to supporting children and young people with special educational needs through *Routes for Learning*, the Foundation Phase, the emphasis on the development of literacy, numeracy and wider skills, the importance attached to the Welsh culture and language, and the revised Welsh Baccalaureate.

The evidence also confirmed that there is a strong case for fundamental change. It was clear that there is a strong appetite for radical changes to the existing curriculum and assessment arrangements, for example to address the overload, redundancy and complexity which has resulted from successive modifications. There was an accumulation of evidence that the current curriculum was not enabling children and young people to achieve the standards they should be capable of. Similarly, assessment and accountability had become unhelpfully intertwined in ways that weaken the power of both to serve children's learning. Very importantly, people saw a need for a curriculum that would better prepare children and young people in Wales to thrive and be successful in a rapidly changing world.

It is important to have a clear definition of what we mean by 'the curriculum'. In the past, the curriculum was often seen as the set of subjects and syllabuses to be taught to children and young people during their school years. However, this definition does not do justice to the broader outcomes that the modern world demands or to the scope of what many teachers already do to support children and young people's development. It fails to establish the overall purposes that the curriculum is intended to serve. Learning is also crucially affected by what and how progress is assessed and how the results of assessment are used. Assessment, therefore, needs to be seen as an integral part of the learning process. The Review has therefore taken the following broad view of the curriculum.

> **The curriculum includes all the learning experiences and assessment activities planned in pursuit of agreed purposes of education.**

The new curriculum should have clear purposes (see page 31). Many countries have adopted statements of aims or purposes as the starting point for their curriculum specification, some more successfully than others. Clear and specific curriculum purposes that are firmly and directly linked to learning and teaching can help teachers to see what their specific contributions to a child or young person's learning should be. They can help children and young people, and their parents and carers, to see the point of what they are learning and how the aspects of learning fit together. They can inform the design of national expectations for the curriculum and be used to identify and plan the content and intended outcomes. They can also be used to determine priorities in the face of inevitable new pressures. If the stated purposes are to succeed, they should be clear and command general support, be consistent with shared values and reflect national priorities and culture. The evidence gathered during the Review pointed, with remarkable consistency, towards elements that should feature in a statement of curriculum purposes for Wales.

The Review has developed curriculum purposes to encapsulate a vision of the well-educated learner completing their statutory education in Wales. These purposes are that **all** our children and young people will be:

- ambitious, capable learners, ready to learn throughout their lives
- enterprising, creative contributors, ready to play a full part in life and work
- ethical, informed citizens of Wales and the world
- healthy, confident individuals, ready to lead fulfilling lives as valued members of society.

The curriculum purposes elaborate these headlines with key characteristics, to provide a practical guide for the planning of the curriculum and teaching and learning.

The curriculum is a curriculum for all children and young people in Wales. The new arrangements are intended to include all of the children and young people of Wales and to enable each of them to progress successfully in their learning. In particular, the curriculum purposes apply to all children. Much of what is proposed in terms of continuity and progression is already a feature of teaching and learning in schools serving children and young people with special educational needs.

The Review proposes a simpler, more coherent structure for the curriculum. The current national curriculum comprises a framework of phases and key stages, core, foundation and basic subjects (statutory and non-statutory), programmes of study, a literacy and numeracy framework and a wider skills framework. Pressures to add to this list are also growing and a number of important 'Task and Finish' reports are also waiting to be incorporated in this already overcrowded landscape. The strong view emerging from the evidence to the Review was that this structure was too complicated and too prescriptive, and has inhibited flow and progression in children and young people's learning and responsiveness to local needs. There was support for a more consistent approach encompassing both the primary and secondary stages, at least to the current Key Stage 3.

The evidence therefore points to the need for a simpler, more connected curriculum that would provide breadth, enable greater depth of learning, ensure better progression and give scope for more imaginative use of time. The weight of the evidence would also support a greater emphasis on skills and an extension of the approach adopted in the Foundation Phase, where Areas of Learning rather than discrete subjects are used as building blocks. Such an approach is increasingly common in curriculum specifications across the world.

In terms of the breadth of the curriculum, the Review proposes using six Areas of Learning and Experience as organisers for the entire age range from 3 to 16. The Areas of Learning and Experience are:

- Expressive arts Area of Learning and Experience
- Health and well-being Area of Learning and Experience
- Humanities Area of Learning and Experience
- Languages, literacy and communication Area of Learning and Experience
- Mathematics and numeracy Area of Learning and Experience
- Science and technology Area of Learning and Experience.

The case for the importance and integrity of each of the Areas of Learning and Experience is made in Chapter 4 of this report. Each has been conceived such that it can encompass significant disciplinary and functional knowledge and skills and have direct relevance to children and young people from 3 to 16. They also provide distinctive contexts within which the four curriculum purposes, including

elements of Cwricwlwm Cymreig, can be pursued. The Areas of Learning and Experience should not be seen as constraining the ways in which schools organise the school day, week or year. They do not lead directly to a timetable based on the Areas of Learning and Experience headings. Their purpose is to organise, in a relatively straightforward way, the national expectations about what children and young people are expected to learn and experience, enabling synergies and connectedness as well as rigour in disciplinary studies. They also signal that the education of children and young people should include rich experiences that are valuable in their own right.

The Review proposes that literacy, numeracy and digital competence should be the responsibility of all teachers. These are so fundamental to thinking, learning and life that they should be developed and reinforced across the curriculum as a whole.

The case for treating literacy and numeracy in this way is now widely accepted and they should both be represented in the curriculum in ways that ensure their progressive development for all children and young people. Literacy and numeracy must mean more than basic competence and must acknowledge their central role in thinking and the ability to use language and number confidently and creatively. The LNF has been widely welcomed, at least in principle, and should be represented in the revised curriculum and assessment arrangements in ways that ensure both the establishment of firm foundations and their further development and reinforcement across all Areas of Learning and Experience.

The argument for treating 'digital competence' in a similar way to literacy and numeracy has become increasingly compelling. Our children and young people already inhabit a digital world and their personal, social and educational lives are increasingly intertwined with technology in various, rapidly changing forms. Full participation in modern society and the workplace already demands increasingly high levels of digital competence and that process can only continue into a future that we cannot imagine. The Review, therefore, takes the view that a digital competence framework should be developed to establish progression in children and young people's learning.

The place of the Welsh language in the curriculum needs to be strengthened. The importance attached to the Welsh language is reflected in the proposals of the Review that all children and young people should continue to learn the Welsh language to the age of 16. Evidence points to confidence in the work of Welsh-medium schools in successfully developing language skills. There remains, however, a need to improve the quality and relevance of teaching and learning of the Welsh language in English-medium schools, particularly for older children. We therefore propose greater focus on children and young people's ability to communicate confidently in everyday settings in the Welsh language, with an emphasis on its increasing role in workplace settings. Welsh-medium schools employ specialists and have a wide range of available Welsh language resources. They are well placed to act as hubs for the Welsh language and to provide support for teachers and other practitioners in English-medium schools.

The Review proposes that the current separation of the curriculum into phases and key stages should be removed. Transition points, whether between sectors or phases, give rise to inevitable questions about continuity and progression. If stages are intended to be distinct from each other, how persuasive are the arguments for separation and what are the consequences? If stages are not distinct, then why do they require a separate label? In exploring these questions, the Review reached the firm conclusion that the period of statutory schooling, at least, should be seen as a coherent and progressive whole, including the move between the primary and secondary sectors.

The Review proposes that depth and progression in learning should be described through Progression Steps, which each encompass a range of Achievement Outcomes. The Review evidence suggested that while the current system of levels within subjects provided elements of depth, the approach had become centred on making general, best-fit judgements about performance at defined points with insufficient attention to progression based on secure learning. The Review is therefore recommending that Progression Steps should be identified within each Area of Learning and Experience at three-yearly intervals over the period of statutory education. Achievement Outcomes should be developed for each Progression Step to reflect the curriculum purposes and embody both disciplinary and instrumental learning as appropriate. The descriptions of expected achievement should be accessible and challenging for all children and young people and draw upon research into children's progress in learning and international norms. They should be expressed in ways that offer headroom for those who master skills and knowledge earlier and support and intervention for those whose progress is slower.

Wherever possible, the various expectations about learning should be embedded in the Progression Steps. Schools and teachers are currently faced with the complex and time-consuming task of accommodating all of the various curriculum expectations in their planning, teaching and assessment. Their task would, therefore, be simplified greatly if such expectations were captured and incorporated at a single point. The Progression Steps provide the vehicle for so doing. The expectations for progression in the three Cross-curriculum Responsibilities should be highlighted and embedded, as appropriate, in the Progression Steps in each of the six Areas of Learning and Experience. The wider skills of critical thinking and problem solving, planning and organising, creativity and innovation, and personal effectiveness together with the elements of the Cwricwlwm Cymreig and *Routes for Learning* should be similarly embedded within the Areas of Learning and Experience. In addition, all teachers should seek opportunities to reinforce and extend these elements wherever that can be done naturally within their normal teaching and learning approaches.

The Review's ambitions can only be translated into reality for children and young people through teachers' and other education practitioners' professional skill and judgement in selecting appropriate teaching methods. The impact of the recommended changes to the curriculum on children and young people's learning will depend ultimately on the quality of the teaching

and learning they experience. The Review proposals will require approaches to teaching and learning that capitalise on the greater professional freedom that they offer to teachers. The high expectations embedded in the Progression Steps will only be realised through effective teaching that engages children and young people's curiosity and enthusiasm through a blend of teaching and learning approaches. Teaching needs to be directly related to pursuing the curriculum purposes, exploiting opportunities to apply and make connections in learning in authentic contexts. Learning should be a pleasurable activity pursued for its own sake and not simply as a means to passing a test or gaining a qualification. Children and young people should learn how to work collaboratively and creatively, taking greater responsibility for their own learning and seeing the relevance of what they are doing to their present and future needs.

The Review proposes a simplification of assessment procedures as well as a stronger role for assessment to support learning. Assessment is integral to effective learning and to informative reporting on achievement. Current assessment arrangements were widely criticised in the Review as being confused, over-elaborate and heavily influenced by the demands of accountability. The Review is recommending a simplified approach to assessment that seeks to strengthen teacher assessment as part of arrangements that reassert its prime role in supporting progression in learning.

Assessment should be driven by a clear understanding of its various potential contributions both to learning and to summative reporting. The key questions about assessment are: who needs what evidence about progress and/or outcomes in achievement, for what purposes and against what deadlines? The answers to these questions determine which assessment approaches are fit for purpose. In particular, our proposals distinguish between purposes that relate to helping children and young people to progress in their learning and those that are required for accountability. Both are important but both can be compromised if they become confused.

Sound assessment evidence is essential in promoting both consolidation and flow in learning. To be effective, assessment requires a clear understanding about what is to be learned and effective and efficient means of gathering evidence about achievement, including through the use of digital technology. It is the prime means of establishing the extent to which the teaching process is bringing about the desired progress in each young person's learning. More direct engagement of children and young people in the assessment process will encourage them to take greater responsibility for their own learning and help develop their capacity to continue to learn effectively after they leave school.

The Review proposes that the Welsh Government should develop an overall assessment and evaluation framework as recommended by the OECD[82]. That framework should define the various roles of pupil assessment and school

[82] OECD (2013) *Synergies for Better Learning: An International Perspective on Evaluation and Assessment* OECD

evaluation and establish clearly the respective contributions of teacher assessment and external testing, stressing their complementary roles. We advise against an over-reliance on external or internal tests, which limits the scope of what can be assessed and fails to reflect necessary breadth in the curriculum. The potential of teacher assessment to cover the full range of learning intentions will require a wider range of appropriate techniques than has traditionally been the case. The recommended depth and connected nature of learning can best be assessed by teachers but that will not happen automatically and will require resources and support. There will be a need to ensure that, taken together, the arrangements for assessment are proportionate and as light-touch as possible and not over-bureaucratic.

A major, sustained change programme will be required to convert the recommendations of the Review into practice. Successful implementation will require a sophisticated change strategy that establishes clear milestones and takes full account of the implications for system and teacher capacity. In conducting the Review we developed a set of principles for curriculum design which have acted as both a guide and a test. These are that the curriculum should be authentic; evidence-based; responsive; inclusive; ambitious; empowering; unified; engaging; based on subsidiarity; and manageable. As we move to implementation it will be important to ensure that the integrity of these principles is not compromised.

One of the keys to successful implementation will be wide engagement in shaping and owning the new curriculum. The process of development needs to build on our initial engagement and ensure ongoing and direct involvement involving not just the teaching profession but also the wider set of interested individuals and organisations that have contributed to our work. All of this will take time for full consideration of the very wide-ranging recommendations of the Review and sustained effort in translating them into practice.

The various aspects of the Review proposals should be consolidated in national guidance for schools. In order to promote consistency in the way in which Areas of Learning and Experience are elaborated, expert groups should be formed and charged with taking this forward using the criteria which we have developed in this report as a guide. These criteria include consideration of the relationship of proposed content to the purposes of the curriculum; an explanation of its boundaries and scope; an outline of necessary experiences and outcomes in terms of knowledge, skills and dispositions; identification of ways in which key elements in the Cwricwlwm Cymreig, the three Cross-curriculum Responsibilities and the wider skills can be taken forward; an explanation of progression and the definition of Achievement Outcomes at specified Progression Steps; advice on teaching and learning strategies; and a description of how assessment should contribute to learning in that area.

The Review recommends that Wales should apply the principle of subsidiarity to curriculum development. One of the tenets of the Review has been the desirability of engaging schools and teachers more directly in shaping the

curriculum in ways that meet the needs of their children and young people. For the future, it will be important to nurture and encourage local ownership and responsibility within a clear framework of expectation and support that provides necessary direction and a sense of national purpose. Legislation should therefore be used sparingly while making clear the duties associated with providing an effective curriculum and appropriate assessment.

The recommendations of the Review have major implications for the professional development of teachers and other practitioners. These include the need to extend teachers' capacity in Welsh language, health and well-being, digital competence and computer science, as well as broader matters such as curriculum planning and assessment. The Welsh Government's New Deal for the Education Workforce and the review being undertaken by Professor John Furlong are well timed to address many of these issues but there will also be a need for more immediate action to build the confidence and capacity of teachers and school leaders in taking forward the Review's recommendations.

The Review recommends fundamental changes to accountability systems. Accountability systems can be the Achilles heel of curriculum reform. The unintended effects of over-exuberant accountability can unintentionally compromise good intentions. The Review proposals will have implications for accountability in Wales, including the need to avoid the detrimental effects of high-stakes performance measures on the curriculum and on teachers' professionalism. The aim must be to establish accountability mechanisms that make a constructive contribution to children and young people's learning and that promote a focus on the curriculum purposes as the agreed goals of that learning.

Taken together, the Review recommendations aim to provide curriculum and assessment arrangements that will meet the needs and aspirations of all those with an interest in Welsh education. For teachers and school leaders they will provide a more straightforward and coherent basis for the exercise of their professional skills. For children and young people they aim to create a more stimulating and challenging educational experience that will help them to thrive and succeed in an increasingly demanding but exciting world. For employers it will help to provide well-educated employees with both the 'hard' and 'soft' skills that are integral to the modern workplace. Parents and carers can engage more directly in their children's learning, receiving clear information about how they are progressing in relation to easily understood curriculum purposes.

Finally, the proposals will require excellent and committed leadership at all levels in the education system. The Welsh Government has signalled its commitment to establishing the kind of collaborative culture that characterises education systems that aspire to excellence. **The recommendations of this Review are intended to support that commitment and to shape a successful and exciting future for the young people of Wales**.

Recommendations

Curriculum definition

1. The school curriculum in Wales should be defined as including all of the learning experiences and assessment activities planned in pursuit of agreed purposes of education.

Purposes of the curriculum

2. The school curriculum should be designed to help all children and young people to develop in relation to clear and agreed purposes. The purposes should be constructed so that they can directly influence decisions about curriculum, pedagogy and assessment.
3. The purposes of the curriculum in Wales should be that children and young people develop as:
   - ambitious, capable learners, ready to learn throughout their lives
   - enterprising, creative contributors, ready to play a full part in life and work
   - ethical, informed citizens of Wales and the world
   - healthy, confident individuals, ready to lead fulfilling lives as valued members of society.

Curriculum structure – breadth

4. The curriculum 3–16 should be organised into Areas of Learning and Experience that establish the breadth of the curriculum. These areas should provide rich contexts for developing the four curriculum purposes, be internally coherent, employ distinctive ways of thinking, and have an identifiable core of disciplinary or instrumental knowledge.
5. The new national curriculum in Wales should have six Areas of Learning and Experience: Expressive arts; Health and well-being; Humanities; Languages, literacy and communication; Mathematics and numeracy; and Science and technology.
6. Children and young people should have their learning developed across the curriculum through three Cross-curriculum Responsibilities that should be the responsibility of all teachers: literacy; numeracy; and digital competence.
7. A digital competence framework and an accompanying 'Routes to Learning Digital Competence' should be developed and be included as a Cross-curriculum Responsibility.

8. The expectations for the three Cross-curriculum Responsibilities and wider skills should be embedded within the Areas of Learning and Experience.

9. Religious education should form part of the Humanities Area of Learning and Experience, and should remain a statutory curriculum requirement from reception.

Curriculum structure – progression

Progression Steps

10. The new national curriculum should be organised as a continuum of learning from 3 to 16 without phases and key stages.

11. Progression should be described in relation to a continuum of learning in each Area of Learning and Experience from when a child enters education to the end of statutory schooling.

12. Progression should be signalled through Progression Steps at five points in the learning continuum, relating broadly to expectations at ages 5, 8, 11, 14 and 16.

13. The initial Progression Steps should take full account of guidance on *Routes for Learning*, which should be reviewed in the new curriculum context.

14. Progression Steps should be reference points, providing a 'road map' for each individual child and young person's progress in their learning and not universal expectations of the performance of all children and young people at fixed points.

15. There should be a duty on schools to provide a curriculum that enables most children and young people to reach, or go beyond, each Progression Step within the broad three-year window.

Achievement Outcomes

16. Achievement Outcomes should be developed for each Progression Step in each Area of Learning and Experience, spanning the components within the Area of Learning and Experience and addressing the Cross-curriculum Responsibilities and wider skills.

17. Achievement Outcomes should contribute clearly to the four curriculum purposes and should have an emphasis on achievement in a broad sense, rather than only narrower measures of attainment. They should include references to relevant experiences which contribute to the curriculum purposes and to which children and young people should be entitled.

18. Achievement Outcomes should be described from the learner's point of view, using terms like 'I have...' for experiences and 'I can...' for outcomes.
19. All children and young people should make progress along the same continuum, regardless of any additional learning needs they may have, although they may reach and move between Progression Steps more slowly or more quickly than others.
20. There should be a clear brief for the development of the Achievement Outcomes, as indicated in this report.

The Welsh language

21. The Welsh language should remain compulsory up to the age of 16.
22. There should be a renewed focus in schools on learning Welsh primarily as a means of communication, particularly oral communication and understanding.
23. Progression in the Welsh language towards transactional competence at age 16 should be appropriately reflected in the related Progression Steps and Achievement Outcomes.
24. The value attached to the Welsh language by children and young people, teachers, parents and carers and the public should be enhanced by strengthening the focus on its commercial value for the jobs market, the suggested cognitive benefits of bilingualism and its importance in enabling children and young people to achieve a good understanding of the cultural life of Wales in the past and present.
25. Investment in and improvements to provision and the raising of standards should focus on strengthening the language in primary schools in order to create solid foundations for learning in Welsh and other languages in secondary school. There will also be a need for support for secondary schools to enable them to improve and adjust their provision
26. Welsh-medium schools should act as hubs for the Welsh language, to support teachers and practitioners in English-medium schools.
27. Systematic links should be established between schools and outside agencies that can support teaching, learning and the provision of resources in Welsh and modern foreign languages, including further and higher education providers and Mentrau Iaith.
28. Significantly better and more creative use should be made of technology in the teaching and learning of Welsh and also modern foreign languages.
29. The Welsh Government should realign Welsh language qualifications at 16 with the proposed focus on speaking and listening and application in the workplace.

30. Implications for enhancing competence in the Welsh language in the education workforce should be taken forward through the New Deal for the Education Workforce and Professor Furlong's review of teacher education.

Choice

31. Between the ages of 14 and 16, all young people should select courses or undertake activities from each of the Areas of Learning and Experience, hence maintaining breadth and meeting national priorities, including science and health.

Pedagogy

32. All teaching and learning should be directed to achieving the four curriculum purposes.
33. Teachers should apply the pedagogical principles identified in this report when planning their teaching and learning, to ensure that the activities relate directly to the curriculum purposes.
34. Children and young people should have opportunities to learn from expertise and experience from outside the school.

Assessment

35. Assessment arrangements should ensure that all important learning intentions and progression in relation to the four curriculum purposes are covered by relevant and proportionate assessment.
36. Assessment arrangements should be based upon the intentions set out in the Achievement Outcomes at each Progression Step within each Area of Learning and Experience.
37. Assessment arrangements should give priority to their formative role in teaching and learning.
38. A wide range of assessment techniques, selected on 'fit-for-purpose' criteria, should be used to reflect the breadth of the curriculum purposes.
39. Teacher assessment, which allows a wide range of learning to be covered, should remain as the main vehicle for assessment before qualifications.
40. Where the results of assessment are to be used for purposes of comparison, issues of reliability in teacher assessment should be addressed through effective moderation; where the prime purpose of assessment is assessment for learning there is less of a need for reliability between schools.

41. Teachers should use tests as an important part of overall assessment arrangements but the limitations of such tests in covering the full range of desired learning should be recognised.

42. External, standardised testing provides important benchmarking information and should be used in combination with school tests and teacher assessment. Its frequency should be kept to a minimum in view of its impact on the curriculum and teaching and learning.

43. Innovative approaches to assessment, including interactive approaches, should be developed drawing on the increasing potential contribution of digital technology.

44. Both self-assessment and peer assessment should be developed as ways of encouraging children and young people to take greater responsibility for their own learning.

45. Reporting to parents and carers on progress in learning should include contributions from their children in relation to their own achievements and aspirations.

46. Summative reporting to parents and carers should include holistic assessments of achievement in relation to the curriculum purposes, drawing on experience from beyond the formal classroom.

47. Children and young people should develop their own e-portfolio, possibly including 'e-badges', to record key achievements and experiences.

48. Summative reporting at key transition points should be supported by portfolio evidence and face-to-face discussions involving the relevant teaching staff.

49. Increased use of digital media should be explored to help to improve the immediacy of feedback to parents and carers and engage them more directly in supporting learning.

50. Local and national policies and practices for assessment should be carefully designed to be as light-touch as possible, while giving sufficient information to assess progress, and avoid unnecessary bureaucracy.

51. Schools should use teacher assessment of progression systematically, together with other sources of evidence, to inform their self-evaluation for school improvement purposes.

52. Initial and career-long professional learning programmes should include elements that build teachers' capacity to assess the full range of curriculum purposes and Achievement Outcomes.

53. The Welsh Government should establish a comprehensive assessment and evaluation framework in line with the recommendations of this report.

The reform process

54. The revised curriculum and assessment arrangements should be introduced through an agile change strategy that establishes understanding and support, sets a measured pace, builds capacity and manages dependencies, particularly accountability arrangements.

55. Separate and independent evaluation arrangements should be established to monitor the effectiveness of the change structure and the new curriculum arrangements in relation to improvements in the quality of learning and performance.

Leadership and steering

56. The Welsh Government should establish an arms-length structure for day-to-day leadership and steering of curriculum and assessment arrangements.

Elaboration and development of Areas of Learning and Experience

57. Each Area of Learning and Experience should be elaborated in line with the brief provided in this report in order to provide practitioners with easily accessible guidance to help with their planning.

Teacher and leadership capacity

58. An extensive and sustained programme of professional learning should be developed to ensure that the implications of the Review recommendations for the skills and knowledge of teachers and other practitioners are fully met.

59. The longer-term implications of the Review for building teacher capacity should be taken forward in the context of the Welsh Government's New Deal for the Education Workforce and Professor John Furlong's recommendations on teacher education.

60. Priority should be given to developing the leadership commitment, understanding and skills necessary for the proposed reforms to succeed.

System capacity

61. The significant implications of the Review proposals for national and local educational infrastructure should be fully recognised. The Department for Education and Skills, regional consortia, Estyn, Qualifications Wales and universities will need to establish mechanisms for coordination and joint working that recognise the responsibilities and respective strengths of each.

National and local ownership

62. The change strategy associated with the Review should apply the principle of subsidiarity, encouraging local ownership and responsibility within a clear national framework of expectation and support.

Legislation

63. The principle of a national curriculum for Wales should be reaffirmed and legislation should define a broad set of duties rather than detailed prescription of content.

64. Where necessary, specific requirements in relation to curriculum and assessment should be described in regulation and guidance, and subject to regular review.

Accountability

65. Accountability arrangements should be strengthened and enhanced in ways that help to embed the new arrangements and drive improvement.

66. Accountability arrangements, particularly inspection, should evaluate and encourage the successful embedding of the curriculum purposes in the day-to-day work of schools and ultimately the outcomes being achieved by children and young people.

67. The school categorisation system should, in due course, be adjusted to reflect the recommendations of this Review.

68. The Welsh Government should no longer gather information about children and young people's performance on a school-by-school basis but should monitor performance in key aspects of the curriculum through annual testing on a sampling basis.

Appendix

Professor Graham Donaldson CB

Before joining HM Inspectorate of Education (HMIE) in 1983, Graham Donaldson taught at various levels in secondary schools in Scotland and also worked nationally on a range of curriculum projects. He became head of the Inspectorate in 2002 and, as the chief professional adviser to Scottish Ministers on education policy, he was closely involved in the Scottish Government's curriculum reform programme, Curriculum for Excellence. Following his retirement from HMIE he was asked by the government to undertake a personal review of teacher education in Scotland and his report, *Teaching Scotland's Future* (The Scottish Government, 2011) has led to a major implementation programme. He is a member of the Royal Society of Edinburgh Education Committee and a Director of the Goodison Group in Scotland. He has established a significant international profile by lecturing extensively, working as an international expert for OECD, advising governments and non-government organisations and leading the international inspectorate organisation as President. He is currently working at Glasgow University where he is a Professor working in the Robert Owen Centre. He was appointed by Her Majesty the Queen as a Companion of the Order of the Bath in 2010.

Review Team

As well as wide-ranging engagement activity, Professor Donaldson has been assisted by the following.

Advisers seconded to the Review from Estyn

Sarah Morgan (Primary Adviser to the Review) – Sarah Morgan has worked for Estyn as an HMI since 2009, inspecting in the primary, non-maintained nursery, independent and initial teacher training sectors in English and Welsh. Prior to that, she worked as a class teacher, deputy headteacher and headteacher for twenty-two years in Rhondda Cynon Taff and the Vale of Glamorgan. During that time, she also worked closely with local authorities and an initial teacher training institute in a variety of leadership and training roles. Her subject specialisms are music and Welsh as a second language. Sarah is a Welsh speaker.

Nigel Vaughan (Secondary Adviser to the Review) – Nigel Vaughan taught in secondary schools in Powys and Shropshire. Following this he took on a role as a local authority senior adviser with a specific focus on humanities (history, geography, RE and anti-racism) and secondary education. Nigel became a HMI in 1991 and has inspected in early years, primary, secondary, further education, local authorities and initial teacher training. Nigel was the secondary lead inspector for a period until his retirement in 2012. From this time he has been employed by Estyn on a part-time basis.

External advisers

Claire Armitstead – Headteacher, Rhyl High School, English-medium secondary school.

Owain ap Dafydd – Headteacher, Ysgol Gyfun Cwm Rhymni, Welsh-medium secondary school.

Kevin Tansley – Headteacher, Tŷ Gwyn School, special school.

Civil service team

Kerry Davies – Diary Secretary to Professor Donaldson.

Denize Morris – Curriculum Adviser to the Review.

Megan Powell – Project Manager.

This team was led by **Jo Trott**.