

AEA-Europe Conference 2017

Symposium

CAMAU Project: Progression Frameworks and Progression Steps

Background Paper

This paper contains information which provides a context for the work of the CAMAU research team based in the Universities of Glasgow and of Wales Trinity Saint David. This information includes an outline of the context of curriculum and assessment arrangements within which the research is situated and provides information on the processes of working with the Pioneer Schools network, a key aspect of the Welsh Government's commitment to subsidiarity in educational decision making.

This paper also includes key findings from the project's Interim Report (October 2017) 'Learning about Progression'.



Principal Investigators: Louise Hayward, University of Glasgow (louise.hayward@glasgow.ac.uk) and Jane Waters, University of Wales Trinity Saint David (jane.waters@uwtsd.ac.uk)

Further information can be obtained from George MacBride (george.macbride@glasgow.ac.uk)

Curriculum Review

The Welsh Government in March 2014 asked Professor Graham Donaldson to conduct a fundamental review of curriculum and assessment arrangements for all children and young people in Wales from the age 3 through to 16. Professor Donaldson had been HM Senior Chief Inspector of Education in Scotland. The report 'Successful Futures' (Donaldson, G (2015) Successful Futures: Independent Review of Curriculum and Assessment Arrangements in Wales Welsh Government) made radical and wide-ranging proposals founded on an extensive evidence base.

Some key statements in 'Successful Futures' regarding assessment

Recommendations related to 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.

pp. 116-117

From Chapter 6: Assessment

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
- 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.

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 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.

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. 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 and are also clearly set out in documents such as The Assessment Reform Group's principles of assessment for learning or, more recently, the Welsh Government's *How to develop thinking and assessment for learning in the classroom* (2010). 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 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...

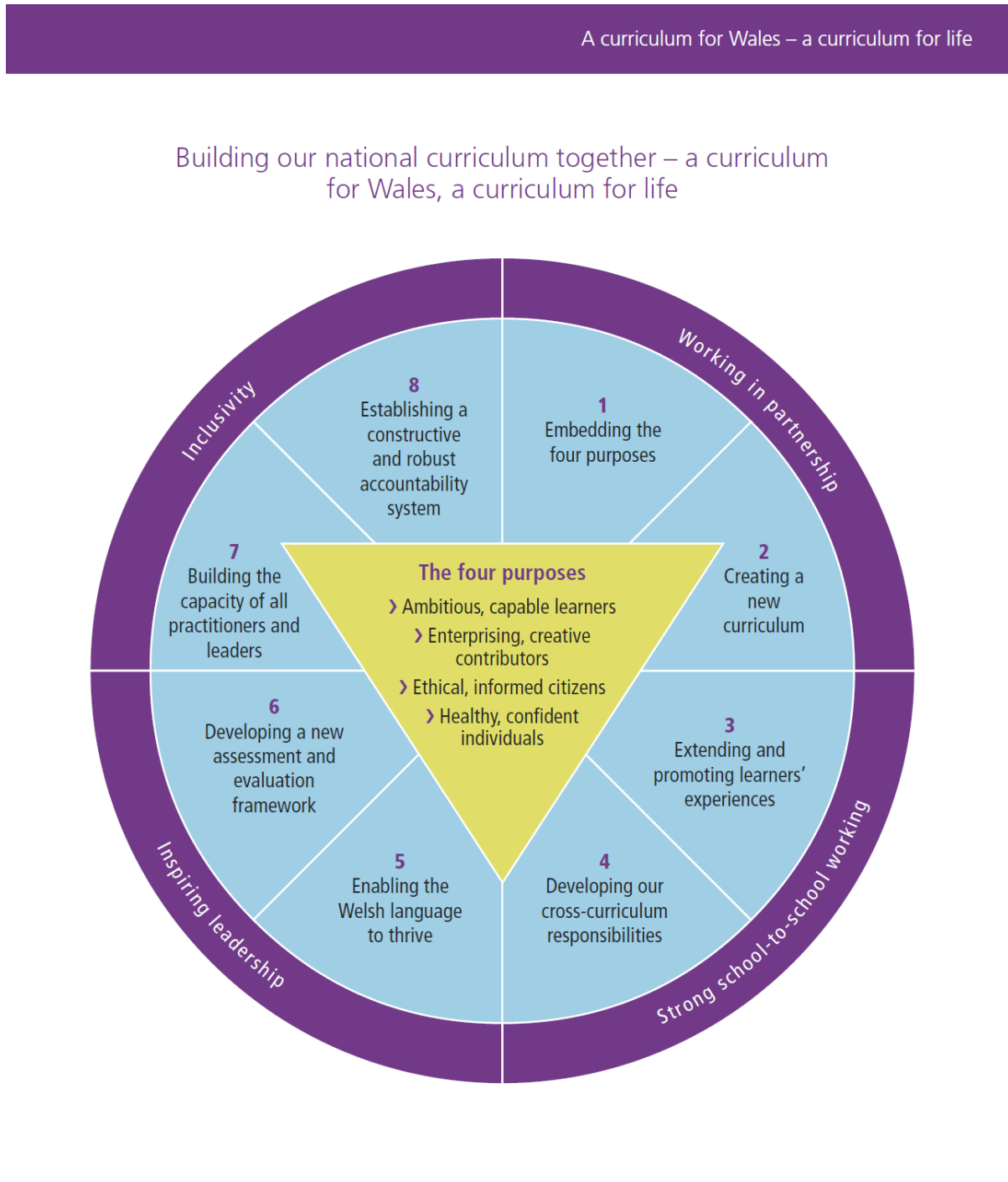
The OECD report points out that 'In all student assessment systems, there is a need for clear external reference points in terms of expected levels of student performance at different levels of education'. The Achievement Outcomes for each Progression Step will provide the context for planning and assessment 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'.

The Review supports the analysis and conclusions of the OECD report... 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... (pp. 74-77)

Curriculum Plans

The Welsh Government accepted the recommendations of ‘Successful Futures’ and published its response as ‘A Curriculum for Wales – A Curriculum for Life’ (Welsh Government (2015)). The following diagram (p. 5) illustrates the building blocks to be included in the development process. Further information on three of these building blocks follows this.

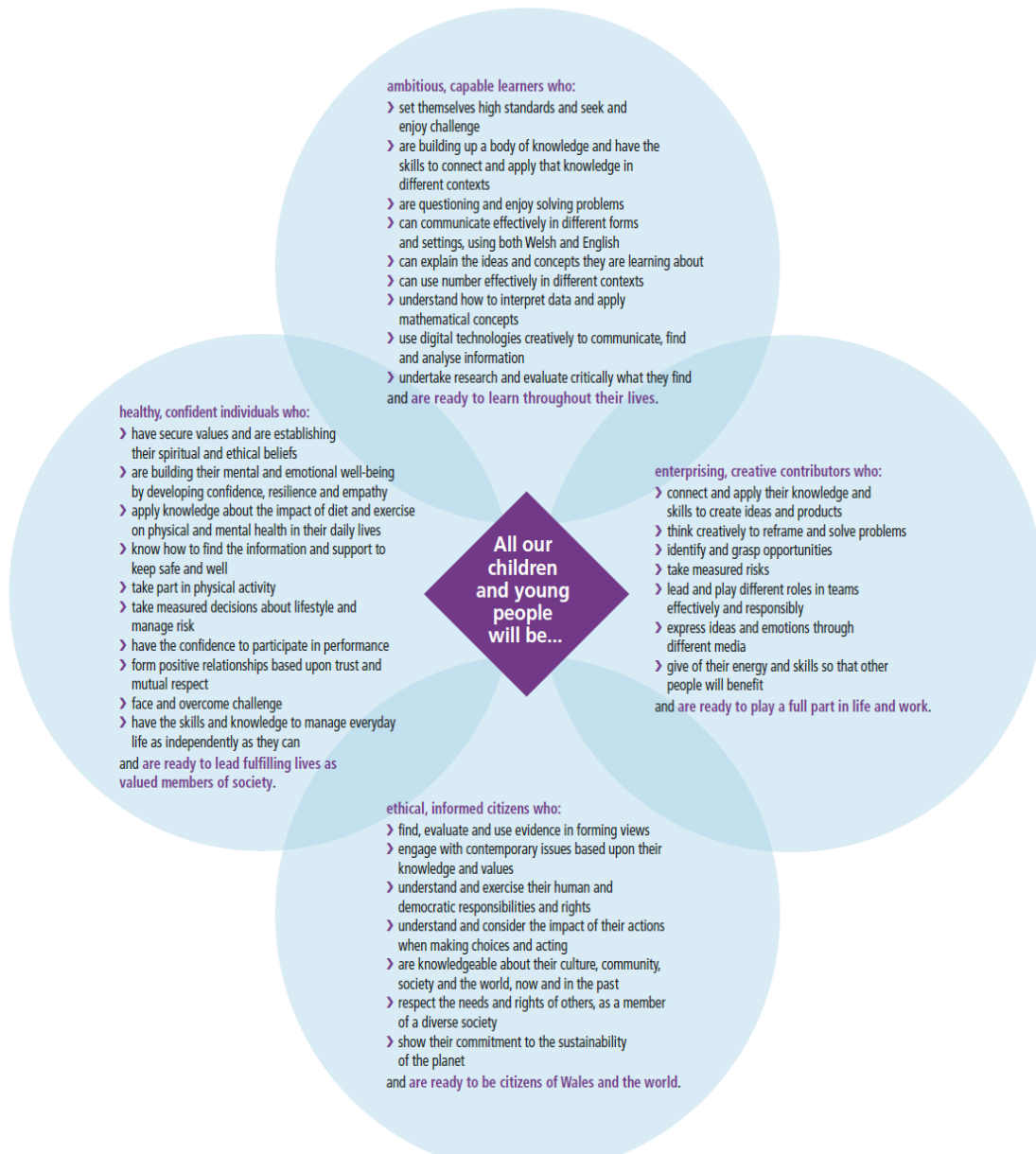


The first of these building blocks is embedding the four purposes identified in 'Successful Futures' as illustrated in this diagram from p. 8 of 'A Curriculum for Wales – A Curriculum for Life'.

Building block 1 – embedding the four purposes

The four purposes will be at the heart of our new curriculum.

They are the starting point for all decisions on the content and experiences developed as part of the curriculum. More than that, they are designed to influence how practitioners plan, teach and assess.



Building block 2 is summarised as follows on pp. 10-11.

Building block 2 – creating a new curriculum

Our new, inclusive, broad, balanced and challenging curriculum will give schools and practitioners more responsibility for determining what is taught. This responsibility will sit within a curriculum that comprises:

- common Areas of Learning and Experience (AoLEs) from ages 3 to 16
- progression reference points at ages 5, 8, 11, 14 and 16
- achievement outcomes which describe expected achievements at each progression reference point
- three cross-curriculum responsibilities – literacy, numeracy and digital competence

The new curriculum will set the parameters for each AoLE. These are:

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

Each AoLE should include, where appropriate, a Welsh dimension as well as an international and UK perspective. Schools will be able to use the AoLEs to determine their own curriculum and how it should be organised. Progression reference points and achievement outcomes will be defined nationally to ensure consistency and that assessment arrangements are fully aligned with the new curriculum, as set out in Building block 6...

Pioneer Schools will work with their wider school clusters and networks and beyond... to ensure that as many learning providers as possible are part of the design and development process. They will share thinking, test ideas and keep them up-to-date with latest developments as the curriculum and assessment framework develops...

We envisage four stages of development.

- Stage 1 – selection, induction and preparation of the Pioneer Network. The Pioneer Network and the all-Wales partnership to agree their programme of work which will define the timelines for Stages 2 to 4.
- Stage 2 – design of framework and principles for each AoLE, including progression reference points and achievement outcomes.
- Stage 3 – developing the content of each AoLE; checking and reviewing with other schools and curriculum experts (taking national and international evidence and research into account) – supported by robust quality assurance processes.
- Stage 4 – further checking and quality assurance, including international benchmarking.

...

Regarding assessment 'A Curriculum for Wales – A Curriculum for Life' set out on pp. 19-20 the following vision

Building block 6 – developing a new assessment and evaluation framework

Successful Futures is clear that assessment is integral to successful learning. The most important purpose of assessment is to inform learning and teaching. Assessment is a crucial part of learning and teaching. When used well, assessment encompasses several forms and techniques to inform and enhance learning and to enable learners to take greater ownership of their own learning and development. It should be a powerful learning and teaching tool. The review made a number of recommendations that offer us a very different vision for assessment and the way assessment is used in Wales. To achieve that vision, it will be essential to develop a new National Assessment and Evaluation Framework. The framework will be based on the four purposes and the key principles set out in *Successful Futures*. It will be designed with the profession and, from the outset, it will be developed to be fully inclusive to make sure the framework covers all learners and all abilities. We will look to and learn from the latest international approaches and good practice from within Wales to inform the design, development and delivery of this framework. A new Quality Assurance Panel working with the Pioneer Network will be key to supporting and guiding the development of this framework.

What needs to happen, when and who is involved?

- Early design plans and principles of the National Assessment and Evaluation Framework will be informed by the practical experience of assessment and additional learning needs (ALN) specialists, supported by current research evidence...
- Welsh Government will bring together quality assurance partners, including HEIs and other experts, to review and provide feedback to the Pioneer Network at each stage of the curriculum design process – from January 2016 onwards as set out in Building block 2.
- Further design and development will be informed by the Pioneer Network, with learning from Pioneer Schools on assessment shared more widely in line with the stages of development of the curriculum set out in Building block 2.
- Digital and online systems for assessment and reporting will be explored and developed closely with the Pioneer Network and digital learning leads. Hwb will be used as a platform to support schools to accurately assess learner outcomes.
- Welsh Government will introduce online adaptive testing from May 2018.
- Welsh Government will publish the National Assessment and Evaluation Framework by September 2018.

Pioneer Schools Network

The Welsh Government is committed to the principle of subsidiarity in developing curriculum and assessment. This reflects the ambition in Wales that all schools develop as learning organisations, in keeping with OECD principles. A key feature of this is the establishment of a network of Pioneer Schools to take forward thinking and practice in various aspects of the curriculum. The CAMAU project has been working with the Pioneer Schools in each area of learning and experience (AoLE).

An initial statement of the role of Pioneer Schools is provided by the Welsh Government in a 2015 document entitled 'Pioneer Schools' (<http://gov.wales/docs/dcells/publications/150630-pioneer-schools-en.pdf>)

Background

... this document sets out a new way of thinking and working together to build our new curriculum and assessment arrangements in Wales, underpinned by the New Deal for the education workforce and the National Model for regional working... To underpin this work we have identified 4 key principles for realisation of the new curriculum – to which the proposals contained in this document adhere and to which we will return at regular intervals. Realisation of the new curriculum will be:

- Evidence led, and based on subsidiarity
- Ambitious and inclusive
- Manageable, with pace, passion and professionalism
- Unified

Role and purpose of Pioneer Schools

In line with these principles, we are inviting the consortia to work with us to identify a network of innovative Pioneer practitioners, their departments and schools across Wales who will play a pivotal role in developing and realising the new curriculum and key elements of the New Deal. All Pioneer Schools will work with each other, with other schools, the consortia, Welsh Government and wider stakeholders as part of an all-Wales partnership... in the first instance, Pioneer Schools will be asked to focus on either one or both of the following:

- the design and development of the curriculum framework – including content of the new Areas of Learning and Experience, progression steps and achievement outcomes and associated assessment arrangements (Curriculum Pioneers); and/ or
- laying the foundations for change by ensuring all practitioners have access to effective professional learning – enabling them to continuously develop and enhance leadership and pedagogy in practice, and supporting them to realise the new curriculum (New Deal Pioneers).

All Pioneer Schools, regardless of their initial focus (Digital, Curriculum and/ or New Deal), will need to work closely together to challenge and learn from each other. Together, they will provide a vehicle to realise the new curriculum across Wales, including ongoing, high quality support in developing their skills in pedagogy and leadership.

Curriculum Pioneer Schools: How will the model work?

The Curriculum Pioneer ... Practitioners – and their departments, schools and settings will work together as part of an all-Wales partnership team to design and develop the new curriculum. They

will be charged with designing the new curriculum framework. This partnership team will need to work closely with those focusing on the New Deal, as well as more broadly with their own clusters (including the non-maintained sector), networks and beyond. The all-Wales partnership team... will need to be inclusive and representative of all of our schools – including Welsh medium schools, special schools and PRUs. It will need to include, as a minimum, Pioneer Practitioners, facilitators, expertise (technical/content/design) as appropriate, Welsh Government and Estyn representation. Welsh Government will also put in place appropriate research arrangements to underpin and inform development of the new curriculum framework. The emerging model will be subject to robust quality assurance arrangements – designed to ensure that it is ambitious and of the necessary high, internationally comparable standard. We will also put in place, from the outset, evaluation arrangements which will be key to informing design and development. The all-Wales partnership team will be charged with designing the new Areas of Learning and Experience (AoLE), including progression steps, achievement outcomes, and assessment and reporting arrangements. The 6 new AoLEs will also need to reflect the 3 cross-curriculum responsibilities - literacy, numeracy and digital competence, ‘wider skills’, and include both a Welsh and an international dimension... The resulting AoLE will then be subject to robust quality assurance at key stages throughout the process.

As well as working as part of the all-Wales partnership team to design and develop the new curriculum framework, the Pioneer Practitioners will be expected to draw on the knowledge, skills and experience of their wider networks – including their departments, schools and wider clusters – to design, develop and test thinking on the emerging model... Pioneer Practitioners will need to be available for a minimum of 2 consecutive days in the early autumn – and up to 2 days a week from January 2016. Some of this time will be spent working as part of the all-Wales partnership team, some with their local networks to share and refine the emerging model. Once in place, the all-Wales partnership team will be expected to develop and agree its forward work plan – including preferred approaches to the task. A summary of the activities which Pioneer Practitioners and their Pioneers Schools will be expected to undertake is set out in the following table:

Activity	Detail
Provide curriculum expertise	Pioneer Schools to release Pioneer Practitioners to be part of the all Wales partnership team, in particular the design and development of the AoLE and/ or the new Digital Competence Framework
And/or: Provide assessment expertise	Pioneer Schools to release Pioneer Practitioners to be part of the all Wales partnership team, in particular the design and development of achievement outcomes as part of the progression steps
And:	Provide pedagogical expertise Through testing thinking on aspects of the new curriculum and assessment arrangements, to provide advice and support on pedagogical practices to support curriculum realisation
And: Local, regional and national leadership	Act as champion for the curriculum and assessment changes locally, regionally and nationally
And: Pathfinder	Test thinking and trial aspects of the new curriculum, including assessment arrangements and feedback to the all Wales partnership team. Monitor and review and feed into evaluation process – longer term

Learning about Progression: CAMAU Interim Report

Building from the evidence emerging from the review of national frameworks and the research literature, the CAMAU team working with the AoLE Pioneer Schools, established a number of principles that might be used to take forward the progression aspirations of ‘Successful Futures’ and ‘A Curriculum for Wales – A Curriculum for Life’. They identified a number of questions that will require consideration and determination by the Pioneer Schools Network before work commences on the development of learning progression frameworks. The following is taken from pp. 151-158 of the report jointly produced by researchers from the University of Glasgow and the University of Wales Trinity Saint David.

Principle 1

The four purposes should inform and be evident in learning progression frameworks and achievement outcomes.

The six reviews in Section Two recognise that each AoLE has specific characteristics, reflected in both research and existing national frameworks. It will be important that learning progression frameworks in Wales recognise these characteristics. In some of the frameworks reviewed, the ‘main aims’ of the curriculum are articulated at the start and then elaborated in detail in a description of the curriculum or in a description of learners’ expected achievement (e.g. learning or achievement outcomes, standards, descriptions of progression) or in descriptions of both. A learning progression framework, the progression steps within it and associated achievement outcomes must reflect or encapsulate what the designers of the curriculum most value in the process of educating young people.

Principle 2

Progression frameworks must relate to what matters

Each progression framework should focus on the knowledge, skills and attributes which have been identified within each AoLE as the heart of successful learning in each domain and must encompass the four purposes of the curriculum.

Principle 3

Learning progression frameworks will place the development of learning at their heart rather than focusing on content or activities.

In the past insufficient attention has been paid to progression in learning with negative consequences for learners and teachers who perceive learning as fragmented and with little sense of clear purpose. This leads to problems with practice in Assessment for Learning where understandings of where a learner is and where a learner might next progress to are commonly not linked into a bigger picture of what matters. Reviews emphasised the interdependency among pedagogic approaches, content and assessment in how progression is described.

Achievement outcomes at each progression step should 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 to move securely to the next phase of learning in that framework.

Principle 4

Progression frameworks should serve two main purposes: broad statements and detailed descriptions

Each AoLE will develop broad statements to provide an overview of the learning journey over time and more detailed statements related to individual topics, themes or other aspects of learning. A little like Russian nesting dolls, the more detailed progression statements should be linked clearly to the broad progression statements and the broad statements should be derived from what AoLEs have identified as what matters.

Principle 5

National progression frameworks should enable and support schools to develop curriculum and assessment practices to suit local circumstances

It is important that broad progression statements are written in a way that allow schools to have the flexibility to ensure that they can relate the curriculum to local circumstances as they maintain high levels of challenge for all learners.

Principle 6

Successful curriculum and progression development requires professional learning

It is important that professional learning builds on available evidence: this involves bringing together research understandings with practice insights in the emerging policy context of Successful Futures. Professional learning will stimulate and support teachers to recognise, build on and develop their pedagogical insights and practice. There are opportunities for professional learning to be built around the development of the national programme rather than simply learning about the national programme. For example, the evidence base to build more detailed progression statements does not exist in all areas. One function of the professional learning programme should involve groups of teachers working together to help build a better evidence base whilst learning about the new curriculum and assessment arrangements.

Principle 7

Where possible progression frameworks should be informed by research evidence

Consistent with the policy aspiration of Successful Futures achievement outcomes should describe significant progression steps within a learning progression framework. Achievement outcomes should not be a checklist of knowledge or skills and should incorporate effective pedagogy; they should inform next steps and be framed as broad expectations achievable over a period of time (approximately 3 years).

Evidence derived from the review which may help to inform decisions to be taken within each AoLE Group: Here, questions arising from the review related to the principles identified above are identified. These are offered as a stimulus for thinking within and across AoLEs as they take decisions on how progression frameworks might best be developed.

1. What are key features of research-informed progression?

Each of the AoLE reports refers to and supports Heritage's (2008) argument noted in section 1 that

'By its very nature, learning involves progression. To assist in its emergence, teachers need to understand the pathways along which students are expected to progress. These pathways or progressions ground both instruction and assessment. Yet, despite a plethora of standards and curricula, many teachers are unclear about how learning progresses in specific domains. This is an undesirable situation for teaching and learning, and one that particularly affects teachers' ability to engage in formative assessment.' (p.2)

Common conceptual features of progression frameworks were summarised in Section 1. Heritage (2008) argues that all models of progression conceptualise progression as a continuum of increasing sophistication of understanding and skills as young people move from 'novice to expert'. This concept is explicit in some of the national frameworks and may underpin others; however, there is a range of understandings of the nature of development from novice to expert. Some learning progression frameworks adopt a developmental view, inviting teachers to conceptualise learning as a process of increasing sophistication rather than as new bodies of content to be covered within specific grade levels; others detail content or very specific skills to be developed at each stage. It seems that approaches may vary from AoLE to AoLE: whether this is the result of different epistemological models or of tradition is unclear. No definition of learning progression contains references to grade or age level expectations, in contrast to many standards and curriculum models as learning is conceived as a sequence or continuum of increasing expertise.

Implicit in progression is the notion of continuity and coherence. Learning is not seen as a series of discrete events, but rather as a trajectory of development that connects knowledge, concepts and skills within a domain. Issues related to interconnection of knowledge, concepts and skills across a domain – or domains – are considered in the individual AoLE reviews; these demonstrate differences between AoLEs, some associated with the range and fit of the domains within each AoLE, some associated with differing balances among knowledge, skills and dispositions. Learning progressions are accommodating. They recognise that, commonly, learners do not move forward at the same rate or with the same degree of depth and progression. This issue was consistently acknowledged in each of the AoLE reviews. A number of existing frameworks do not appear to allow learners to move forward at different rates.

Learning progressions enable teachers to focus on important learning goals, paying attention to what a learner would learn rather than what a learner would do (the learning activity). The learning goal is identified first and teaching, pedagogy and assessment are directed towards that goal. 'Consequently, the all too common practice of learning being activity driven rather than driven by the learning goal is avoided.' (Heritage 2008 p.5). Clear connections between what comes before and after a point in the progression offer teachers a better opportunity to use assessment to calibrate their teaching, to address misunderstandings or to develop skills, and to determine what would be important next steps to move the student forward from that point.

2. Who might key audience(s) be for Learning Progressions?

Learning progression frameworks provide teachers with an overview of the curriculum and provide learners with a bigger picture which allows them to relate what they do on a day-to-day basis to a broader understanding of what matters. The AoLE reviews set out the intentions for the articulation of progression and achievement that can be summarised as follows:

Achievement Outcomes and any associated description of learning progression should enable teachers to know what kinds of knowledge, skills and aptitudes they should aim to develop with learners at all stages of their learning journey. Achievement Outcomes should enable both teachers and learners to see the next steps to be taken.

The purpose, scope and structure of the progression frameworks within and across AoLEs will need to be clear to those who will use them prior to developing their content.

As noted in section 1, Black *et al.* (2011) make a strong case for the centrality of teacher assessment. This is well supported in the reviewed literature and international models where the potential for rich evidence of progression and better standards of validity and reliability than national or state tests are noted. However, each AoLE review highlights that, as Black *et al.* (2011:106) suggest, attaining a position where teacher assessment fulfils this promise may require significant professional development. Lambert (2011) also raises the issue that the actual understanding (and perhaps even the actual relevance) of level descriptors is often questionable. Lambert cites the difficulties that teachers have in identifying work to exemplify certain levels, implying an uncertainty about what constitutes a level (and therefore arguably progression).

Heritage (2008) reminds us that many learning progressions are written primarily for teachers and tensions can arise if a single learning progression attempts to serve too many purposes. For example, problems can arise if it is assumed that the same degree of granularity (level of detail) will serve both long term planning and assessment to support immediate next steps. The degree of granularity in a learning progression designed to ensure that teachers have an overview of progress from novice to expert is very different from the degree of granularity necessary to enable teachers to support learning formatively: the latter would require a far more detailed analysis of progress in learning.

Learning progressions can also be written in ways which provide a framework for learners to understand their own learning journeys. Such models were not explicitly noted in the AoLE review reports. Heritage (2008) argues for the importance of learners being aware of longer term goals and the relationship between those and their day to day progress. Increased involvement in learning occurs when teachers share with the students what their longer-term goals are and enable them to participate in evaluating the degree to which they have met the goals.

3. How detailed should the descriptions be? (described in research literature as 'granularity')

There are different understandings about what is meant by progression in learning. It is important to make a clear distinction between learning progression as providing an overview of the long journey from emerging to expert in a domain and as detailed insight into the expectations of immediate progression in learning within a topic in a given domain. Both are necessary and inter-related but different in their purpose, scope and level of detail. Both should help teachers and learners to see, and indeed to develop habitual awareness of, the appropriate next steps, as dialogue and assessment for learning take place during the learning process. Heritage (2008:2) suggests that greater attention should be paid to the different levels of specificity used to articulate the curriculum. Some curricula specify detailed objectives to be mastered at each grade in sequence. When the curriculum is described in this level of detail, 'grain size', it may be difficult to see how these many discrete objectives connect to bigger, organising concepts; learning can become little more than a checklist of things to be learned. Curricula organised around core concepts or 'big ideas'

and sub-concepts offer better opportunities for a stronger relationship between formative assessment and learning goals. However, Heritage (ibid) argues that care also needs to be taken with this approach for too often 'big ideas' are not brought together as a coherent vision for the progressive acquisition of concepts and skills. Without a coherent vision the potential for teachers to have a broad overview of learning in a specific domain is restricted.

The AoLE reviews include some detail about specific models for progression which teachers may employ; these may be domain-specific or applicable more generally.

All of this implies the need for consideration not only of the determination of the central aspects of achievement in the AoLE but also of the appropriate (that is, helpful and manageable) levels of specification of description of achievement. If the central aspects are described in 'lean' statements, then it will be necessary to consider the most appropriate format: e.g. succinct broad statements, possibly with a small amount of expansion; or narrative descriptions. It will also be necessary to consider where more detailed guidance and support for teachers about progression, next steps and pedagogy should be located and how this could be used? If descriptions of achievement are detailed, it will be necessary to consider how these can be used effectively to support assessment for learning and progression, given the issues about manageability which have been raised.

There is evidence from several countries reviewed that exemplification of standards through learner work significantly reduces the level of abstraction. Descriptive statements alone do not always make clear what performance/behaviours at a given level would look like in a classroom and this is a potentially powerful way of addressing this issue. The use of such material to inform professional learning requires consideration. Several of the reviews raise the issue of the most appropriate location of detailed guidance for teachers about progression, next steps and pedagogy: within the curricular/progression framework itself or in associated material available to teachers as part of their continuing professional development? Related to this is the question of how such material can be most effectively used to support professional learning.

4. Steps in a learning journey?

The issue of relating learning progression frameworks to ages, stages or even phases has already been referred to. Research argues that this should not be the case on both fundamental and instrumental grounds. As the groups develop an empirically well-founded learning progression framework where achievement outcomes describe learning necessary to make further progression, how will they address the issue of descriptions of achievement which are related to phases?

The reviews of international frameworks demonstrate how some frameworks seek to differentiate the performance of learners' who are at the same chronological or grade stage by using a grading system or mark. This may take the form of such phrases as *Not Yet Within Expectations*, *Meets Expectations* (minimally), *Fully Meets Expectations* and *Exceeds Expectations* or a mark such as: *1 = limited effectiveness*, *2 = some effectiveness*, *3 = considerable effectiveness* and *4 = a high degree of effectiveness or thorough effectiveness*. This matter may be related to the level of specification or the number of stages of development employed in a framework. A possible justification for the kinds of grading or marks systems shown may be that very broadly defined frameworks do not give teachers and learners enough detail in deciding on next steps in learning. An obvious potential disadvantage is the danger of labelling learners and the associated motivational issues. Such grading approaches are usually linked to statements of standards which themselves may be linked to age

and stage; there is powerful evidence that such approaches divert teacher and learner attention away from learning to simplistic models of attainment.

The reviews demonstrate that existing frameworks can provide ungraded descriptions of complex achievement and interacting skills. These may be supported by desirable guidance and support for pedagogy and assessment for learning through additional associated material and by encouraging continuing professional development activities.

5. How might the progression frameworks relate to previous frameworks?

During the process of review it was noted that the former National Curriculum in Wales and the Literacy and Numeracy Frameworks used progression frameworks which took some account of pupils' varying pace of progress. This raises the prospect that there may be some value in looking at earlier local models of curriculum and learning progression in the writing of new achievement outcomes. However, it was also noted that practice must align with the new intentions for the curriculum in Wales: in particular, the requirements to address the four purposes; the fundamental importance to learning of ensuring that curriculum, pedagogy and assessment are coherent and aligned; and the need to move from backward focused statements of standards to forward focused statements of achievement. This has implications for the development of learning progression frameworks which support effective learning.

While considering descriptions of performance it is worth noting the Review of the National Curriculum in England (2010-2014) was highly critical of the previous levels-based system. In this context, best-fit judgement failed to recognise major gaps in children's knowledge and contributed to superficial coverage of the curriculum because the levels-based system encouraged learners to move on to new content without secure grasp of key areas.

6. Relationship with literacy, numeracy and digital competence frameworks?

The Languages, Literacy and Communication review notes that *Successful Futures* explicitly states that the achievement outcomes and progression framework for Languages, Literacy and Communication should take appropriate account of the national Literacy Framework. There are therefore important decisions to take about how the development of the Languages, Literacy and Communication learning progression framework may relate to the Literacy Framework. Parallel issues will apply in the articulation of progression for numeracy with Mathematics and Numeracy and for digital competency and the computing aspect of Science and Technology. All AoLE groups will wish to consider how achievement in these three frameworks and in other cross-curricular aspects may be reflected in their learning progression frameworks.

7. What view do we have of the developing child and young person?

The place of child development within the domain and associated expectation for progression in learning is raised in several reviews. Pellegrino (2017) suggests that although learning progressions are not developmentally inevitable, they may be developmentally constrained. This issue was noted in some AoLE reviews and was of particular importance for the H&WB AoLE review. It may be that this issue is more broadly applicable, especially in the earliest years of learning. When considering progression (e.g. in H&WB), links have been made to research in child development. While child development differs from progression in learning within a domain, developmental stages are closely tied to achievement within H&WB: a young child typically cannot run, regulate emotions, navigate social situations or demonstrate self-control as well as an older child. Teachers may draw on

knowledge of child development to understand what typical development looks like within the physical, mental, and social domains, identify when pupils seem to be developing atypically and provide support to maintain the progress of all learners. Progress in domain-related learning relates to developing metacognition and self-efficacy; this observation underlines that there is a complex relationship between children's progress in the H&WB and their progression in other AoLEs.

While it is argued that research undertaken on cognition and learning has led to the emergence of highly developed descriptions of progression in particular curricular areas, specifically science, reading and mathematics (Pellegrino 2017), the evidence from several of the AoLE reviews is that this is often at a micro or detailed level (e.g. one topic) rather than over a longer time scale. Learning progressions can be developed through tracking the actual development of thinking/learning during a sequence of learning or topic. The premise of these 'learning progressions' is that they allow the teacher to understand the ways in which learners progress in their thinking or skill development in order to track progress. This approach would seem to have the potential to produce evidence based learning progressions which would act as a usable version of level descriptors and would support a genuinely formative process of checking current attainment against a known progression and the setting of targets for improvement. However, it should be noted that such progressions are extremely complex (taking 2-3 years to produce) and that a large number of these may be needed in order to cover 'big ideas' within any curriculum area.

Children and young people are beings not becomings. The four purposes describe what all children and young people should become and achieve through statutory education as well as how they are perceived and positioned to experience the curriculum. *Successful Futures* (p.22) argues that:

*'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** [authors' emphasis]. 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'.*

Recommendation 2 (p.23) states:

'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'.

The purposes therefore tell us about how children should experience their curriculum day to day. Each child's learning continuum functions as a journey through the curriculum; while the road map will be common to all learners, this journey should allow for variety of pace, diversion, repetition, and reflection, as appropriate for each individual to make progress in learning. There is therefore a greater responsibility for schools and teachers to ensure that learning is child-centred, since the details and pace of each journey are set according to the requirements of the learner, always in order to ensure challenging, sustainable and effective learning takes place.

As children and young people move through the education system in Wales they must not be viewed as *aiming towards* the four purposes, but rather must be seen *as living the four purposes* during their time at school – the purposes, then, are not simply goals to be reached at the age of 16, but are

also descriptions that inform how we ‘position’ children throughout their education in schools in Wales.

8. What view do we have of pedagogy?

The notion of ‘child-centred’ learning and children ‘working at their own pace’ can imply a pedagogic role that is facilitatory; that is, the role of the teacher is to facilitate the child or young person to lead their own learning or set the pace and/or direction of this learning; the teacher does not take a pro-active role in progressing this learning. It is suggested here that such a view of pedagogy in the new curriculum will be unhelpful. Wales has experience of significant curricular innovation in the shape of the Foundation Phase, introduced in 2008. Recent evaluations (Siraj 2014; Welsh Government 2015) have indicated that poorly understood models of appropriate pedagogy hampered the success of the innovation that, where effectively implemented, has had positive impact on learner outcomes.

Successful Futures provides clear guidance on what is meant by appropriate 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.

Teachers will draw on a wide repertoire of teaching and learning approaches in order to ensure that the four purposes are being fully addressed and that all learners are engaged and the needs of individual learners are recognised. Teachers will avoid labelling teaching approaches; rather they will consider their appropriateness in terms of purpose. Approaches will encourage collaboration, independence, responsibility, creativity and problem solving in authentic contexts which will draw on firm foundations of knowledge. Approaches will employ assessment for learning principles and make use of scaffolding, modelling and rehearsal.

In order to enact the vision set out in *Successful Futures* it may be helpful to signal *intentional pedagogic approaches* throughout. That is, the teacher, with the support of appropriately articulated progression frameworks, undertakes to work intentionally with each learner in the direction of progress and to maintain a focus on pace and ambition throughout this process. AoLE groups will wish to consider how this approach may be facilitated by the learning progression frameworks which they develop.