LONDON'S GLOBAL UNIVERSITY

Evaluation of the BBC's Bitesize Programme

with special reference to the different educational frameworks of the UK's component nations

Dr Sandra Leaton Gray and Professor David Scott
UCL Institute of Education

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Table of Contents

Education in England, Scotland, Wales and Northern Ireland

Introduction

In this report we give a detailed account of the educational systems of England, Scotland, Wales and Northern Ireland, in particular identifying similarities and differences in terms of:

- organisation and class sizes,
- overarching curriculum trends (but not specific subject content),
- assessment trends,
- post-16 education patterns,
- general teaching and learning trends,
- homework trends,
- the application of different teaching materials and techniques, for example, online learning,
- the application of different pedagogies,
- the role of pupil confidence in determining and defining success,
- the balance between teacher instruction and learner autonomy, and
- how far extra material would be needed and welcomed by particular types of learners in each nation and across the United Kingdom.

Although the four countries have a broadly similar structure, there are significant variations between the school systems, ranging from the age that children start school to the type of tests they take.

Organisation, ratios and class sizes

Throughout the United Kingdom, schools are organised into year groups, so children are taught with others of the same age (although in some schools, for example, very small ones, or those that admit more than 30 children in one

year, year groups may be combined within the same class). In most areas, school years are then grouped together in larger stages or phases, usually with different curriculum requirements and outcomes for each.

1. In England, the Foundation Stage includes Pre-school, Nursery and Reception. Key Stage 1 covers Years 1 and 2. Key Stage 2 covers Years 3 to 6. Key Stage 3 covers Years 7 to 9; and Key Stage 4 covers Years 9 to 11.
2. In Wales, the Foundation Phase covers children from age three until the end of Year 2 (this has recently replaced Key Stage 1). Key Stage 2 includes Years 3 to 6. Key Stages 3 and 4 comprise Years 7 to 9 and 10 to 11 respectively.
3. Children in Scotland complete seven years of primary school, beginning in P1 (the equivalent of Year 1 classes in England), going up to P7 (the equivalent of Year 7 in England). After this, they do six years of secondary school from S1 to S6 (equivalent to Y8 to Y13 in England). Secondary schools in Scotland are also known as high schools or academies (though the term is used differently in England).
4. In Northern Ireland the Foundation Stage includes Years 1 and 2. Key Stage 1 covers Years 3 and 4. Key Stage 2 comprises Years 5 to 7. Key Stage 3 covers the age group of Years 8 to 9, and Key Stage 4 the age group of Years 10 to 11.

Starting school

In England most children start primary school in the September before they turn five. In Wales children start Reception in the September before turning five. In Scotland children with birthdays between March and August start school in the August following their fifth birthday. Children with birthdays between September and February start school in the August before their fifth birthday (but this can be deferred until the following September). Northern Ireland has the lowest compulsory school starting age in Europe: children who have reached the age of four on July 1st start school the following September.

Pupil teacher ratios

Pupil teacher ratios vary across the four nations. Latest UK Government figures (2014-2015) are:

England	20.3 (Primary)	15.0 (Secondary)
Scotland	16.8 (Primary)	12.2 (Secondary)
Wales	25.3 (Primary)	16.2 (Secondary)
Northern Ireland	21.1 (Primary)	15.2 (Secondary)

Class Sizes

More than 100,000 infants are being taught in primary school classes larger than the statutory maximum, as state schools in England, Northern Ireland and Wales take advantage of rules allowing them to avoid the statutory class size limit. (In Scotland there are different rules.) In Scotland the percentage of P1 to P3 pupils in class sizes of 18 or less increased from 12.7% in 2006 to 21.6% in 2010, before decreasing to 12.2% in 2015. In the rest of the United Kingdom, more than 1 in 20 infant school classes are above the statutory maximum, with most able to exceed the legal limit because of exemptions to the maximum of 30 children. The 2015 school census reveals that the number of primary school pupils has risen by 2% in England, with the extra 94,000 pupils equivalent to a rise of six pupils in each of the 16,800 state primary schools.

The number of reception, year one and year two pupils in lawfully large classes in England jumped from 76,000 in 2014 to 96,000 in 2015, a rise from nearly 5% of all pupils to nearly 6%. But while the number of lawful classes with more than 30 pupils rose from 2,400 in 2014 to nearly 3,100 in 2015, the average infant class size was unchanged at 27.4 pupils. That was helped in part by a drop in the number of classes that illegally breached the limit, suggesting that schools have become more adept at winning legal exemptions for larger classes. It is generally accepted that smaller class sizes have beneficial effects for children, especially at primary level. However, the

optimum class size depends fundamentally on the activity being undertaken in the classroom.

Independent schools

The number of pupils in independent schools in all four nations of the United Kingdom rose slightly to 570,000, nearly 7% of 8.3 million full-time pupils. The total attending private schools is below its recent peak of 2004, although the figure has changed little[1].

Curriculum trends

Traditionally teachers across the United Kingdom had a large degree of autonomy over the curriculum. This remained the case until the early 1990s, with the introduction of the National Curriculum, a statutory requirement in all state maintained schools in England, Wales and Northern Ireland. (There were slightly different arrangements made for Scotland.) However, more recently this position has changed, as academies and free schools are not required to teach the National Curriculum, and can instead develop their own curriculum[4]. In addition, each country of the United Kingdom has its own curriculum, and although much of the content is similar, there are differences in the programmes of study. England and Wales follow the *National Curriculum* (with the exceptions of the foundation phase in Wales, and English academies, free schools and private schools). Northern Ireland follows the *Northern Ireland Curriculum*, and Scotland follows the *Curriculum for Excellence* for nursery, primary and secondary schools.

1. In England, the National Curriculum applies to most children in Key Stages 1 to 4. It includes subjects as diverse as English, mathematics, science, art and design, computing, design and technology, geography, history, music and physical education. Key Stages 2 and 3 children must also study a foreign language. However changes have started to take place, and currently in England, we have four curricular approaches in common use.

a. The majority of schools have continued to use the National Curriculum as a basis for their teaching and learning, and this is the most common approach, particularly in the case of 'converter' academies ('Outstanding' schools that became academies after rules changes following the 2010 general election). The National Curriculum has proved to be surprisingly enduring and popular, most likely on account of its relative flexibility and inclusive nature[5].

b. A small number of schools have developed their own curricula, for example smaller free schools and studio schools with particular educational philosophies or approaches[6]. These appear to vary in content and approach but overlap with the National Curriculum for the purposes of GCSE and Advanced Level examinations.

c. Sometimes schools run more than one curriculum at once, for example, using the International Baccalaureate Middle Years Programme[7] alongside a GCSE orientated curriculum concurrently for the same pupils.

d. A growing number of schools have started to develop curricula as groups, for example, schools belong to a multi-academy trust (MAT). Again, these vary in content and approach, and once again there is overlap with GCSE and Advanced Level requirements, but embedded within them, there is often a marked emphasis on concepts such as 'mastery', 'core knowledge' and 'cultural literacy' (derived from the writings of the US philosopher E.D. Hirsch)[8]. Such approaches have been heavily criticized on a number of grounds, and it would be fair to say that they have also become highly politicized. Currently a great deal of confusion surrounds their adaptation and implementation[9].

2. The Welsh curriculum has recently been revised. Schools follow the National Literacy and Numeracy Framework (NLF), which focuses on literacy and numeracy across the whole curriculum. The Curriculum for

Wales identifies different areas of learning: personal and social development, wellbeing and cultural diversity, language, literacy and communication skills, mathematical development, Welsh language development (using Welsh as the first language in school, or learning it as a second language), knowledge and understanding of the world, physical development and creative development.

3. In Scotland, the Curriculum for Excellence includes expressive arts, health and wellbeing, languages, mathematics, religious and moral education, sciences, social studies and technologies. It represents a major educational reform that is intended to provide a wider, more flexible range of courses and subjects than undertaken in the UK National Curriculum. Since the Scottish government only sets guidelines about the school curriculum, schools need not follow rigid learning paths and can make their own decisions about what to teach pupils.

4. The Northern Ireland Curriculum requires children in Key Stages 1, 2 and 3 to study language and literacy, mathematics and numeracy, the arts, the world around us, personal development and mutual understanding, religious education and physical education. The Northern Irish school system allocates pupils to grammar schools and secondary modern schools as a result of their performance in the 11+ examination.

How are children assessed?

Across the United Kingdom, children's learning is formatively assessed by their teachers as a part of their teaching and learning programme. This is through activities such as: working with other people, individual study, sharing, debating, playing games, working with amplifying technologies, summarising, writing, talking, listening, reflecting, meta-reflecting, demonstrating, giving feedback, responding to feedback, engaging in a conversation, building a

physical structure, remembering (recalling), categorising a concept, evaluating an idea or practice, enumerating, grasping the meaning of informational material, explaining, generalising, applying previously learnt information in new situations to solve problems, and many more. In some areas, there are also externally set assessments at specific points of a child's education.

Scotland has its own qualification framework that is separate from the one set for England, Wales and Northern Ireland, but each of these separate frameworks is recognised around the United Kingdom. More specifically:

1. In England, children have a baseline assessment in their reception class to assess their ability on starting school (from September 2016), a phonics screening test at the end of Year 1, Key Stage 1 SATs in English and mathematics in Year 2 and Key Stage 2 SATS in English, spelling, punctuation and grammar in Year 6 (and in other subjects), as well as formal GCSE examinations at 16 years of age.

2. In Wales, children take literacy and numeracy tests every year from Year 2 to Year 9. These are marked by their teachers, and the results are made available to individual parents. They then sit formal GCSE examinations at 16 years of age, as in England.

3. In Scotland, general screening takes place in P1 (Primary 1, or the first year of school) to assess children's ability on starting school. There are standardised assessments in reading, mathematics and spelling every year from P2 to P7. In addition, each year, a random sample of children in P4 and P7 are chosen to take the Scottish Survey of Literacy and Numeracy. This is to build a complete picture of literacy and numeracy across the country, rather than to assess the individual child. From 2017 new standardized assessments will be introduced for Scottish pupils in P1, P4 and P7. The new assessments will focus on literacy and numeracy. In addition to this, in 2016, three new

qualifications were introduced: Nationals, Highers and Advanced Highers. Most children are around 15 years of age when they take Nationals. They may opt to stay in secondary school for two more years to take examinations for Higher qualifications (which they will need in order to apply for university) and Advanced Highers, which are equivalent to the first year of university and used for applying to enter the second year of university. Currently Scotland does not formally assess primary and secondary students in Key Stages (and there are no SATs). Optional assessments can include a standardized examination for each subject a child studies, set out in the 5-14 curriculum (within the *Curriculum for Excellence*)[2], and InCas tests[3]. However it is up to the teacher to decide when the student will sit the examination, and assessments are not dependent solely on examination results. The examinations are used by teachers to moderate their own judgments of how students are performing.

4. In Northern Ireland, children are assessed every year through teacher assessments and planned tasks and activities. Formal results, in the form of levels, are reported to parents at the end of Years 4 and 7. The cross-curricular skills of Communication, Using Mathematics and Using ICT have statutory assessments at the end of Key Stage 3. Children sit GCSE examinations at age 16.

Post-16 education

After completing compulsory full-time schooling at the age of 16 in all four nations, students may legally leave school, but they must attend college or university, start work, undertake voluntary work or take up an apprenticeship, or combine aspects of all of these. Some, however, study A-levels, Scottish Highers and Advanced Highers, Higher and Advanced Diplomas or equivalent qualifications as sixth-form students in a school, sixth-form college or college of further education. This is the stage of education and training that takes

place after the school-leaving age of 16. Over 400 further education colleges across the United Kingdom offer a wide range of programmes, including English language (ESOL) courses, some GCSEs, SQA Nationals, A-levels, Highers, Advanced Highers and other equivalents, work-based courses, university access courses and some degree courses. In addition, the United Kingdom has over 120 universities and more than 50 higher education colleges, which offer a wide range of courses, most of which lead to degrees or equivalent qualifications, postgraduate qualifications or doctorates.

General Teaching and Learning Trends

Curriculum arrangements apply to all aspects of the teaching and learning environment: subjects to be taught, relations between subjects, core and optional curriculum elements, different types of teaching groups, summative forms of assessment, and curriculum integration. The extent of curriculum integration can be placed on a linear scale, with traditional disciplinary approaches at one end (i.e. separate subject disciplines such as Physics, Chemistry and Biology) and networked approaches at the other (i.e. General Sciences or Social Studies). In between these two points, traditional and networked, there are eight other points on the continuum: connected, nested, sequenced, shared, webbed, threaded, integrated and immersed[10]. Over the last 30 years in all four parts of the United Kingdom and at all levels of schooling, there has been a move to reinstate traditional approaches (especially at primary level) at the expense of networked approaches in most school and university curricula.

Spelling and Grammar ('SPAG')

There is an increasing emphasis on the universal acquisition of key literacy and numeracy skills, including spelling and grammar. These are being taught in a highly didactic manner with extensive direct transmission of specialist terms and nuanced grammatical constructs that will not be familiar to many linguists, let alone parents. This has been widely criticised[11]. It is likely to diminish in popularity in the future, on account of its limited applicability in later life, in the way that the Initial Teaching Alphabet and its largely phonetic alphabet did in the 1970s[12]. However children who began primary school after the 2010 election will be increasingly familiar with these terms and ideas and expect to see them used by others. In England, Wales and Northern Ireland, teachers are now encouraged to teach reading through a system of synthetic phonics (and this is supported by the current United Kingdom government).

Learning Models

It is possible to identify a number of learning models: assessment for learning, observation, coaching, goal-clarification, mentoring, peer-learning, simulation, instruction, concept-formation, reflection, meta-cognitive learning, problem-solving, on-line learning and practice[13]. These are applied to different degrees and in different places in schools in the United Kingdom.

Perhaps the most influential of these is the assessment for learning model. Assessment for learning can be presented as five key strategies and one coherent idea. The five key strategies are: engineering effective classroom discussions, questions, and learning tasks; clarifying and sharing learning intentions and criteria for success; providing feedback that moves learners forward; activating students as the owners of their own learning; and activating students as instructional resources for one another. And the coherent idea is that evidence about student learning is used to adapt instruction to better meet learning needs; in other words, teaching is adaptive

to the student's learning needs and evidence from the assessments is used by teachers, learners, or their peers to improve instruction[14].

Changes in Primary Mode of Assessment

A number of significant changes are taking place in school assessment, many of which go in the opposite direction to trends in other countries. For example, there has been a reduction in the amount of teacher-assessed coursework in examinations, and an increase in the reliance on timed, unseen examinations. Some post-1988 data suggest that this may favour boys[15], although there is other evidence to suggest such changes may have no impact on gender-related attainment[16]. Regardless of this, it is likely that time management is going to become increasingly important to all pupils, as will very precise examination technique such as reading questions and checking answers, as they seek to maximize their marks. Gaming techniques may be seen as useful here[17] as pupils seek to accelerate their thinking and double guess examiner mindsets. Subjects and areas that cannot be readily assessed or which are not statutory requirements are generally considered by many critics to be marginalized in the four national systems[18].

School Inspection

English schools are inspected by the *Office for Standards in Education, Children's Services and Skills* (Ofsted). This typically happens once in every five years, but more often for schools where problems have been highlighted. Schools are rated 'Outstanding', 'Good', 'Requires Improvement' or 'Inadequate'. In Wales, schools are inspected by *Estyn* at least every six years. They are graded from 1 ('outstanding') to 5 ('poor'). In Scotland, *Her Majesty's Inspectorate for Education* monitors schools. They choose a random sample of 240 schools across the country to assess each year. Schools are not given a specific result or grade, but a letter explaining their strengths, weaknesses and targets. Northern Irish schools are inspected by the *Education and Training Inspectorate* (ETI), using a risk-based schedule,

so schools that are causing concern will be inspected more frequently. Schools can be rated as ‘Outstanding’, ‘Very Good’, ‘Good’, ‘Satisfactory’, ‘Inadequate’ or ‘Unsatisfactory’.

OFSTED inspections have become more detailed and frequent over the last decade, and the introduction of the ‘Requires Improvement’ grade, has meant that many schools are increasingly moving towards a simplified curriculum with less variety than in previous years, also taking fewer risks in delivery, particularly for deprived pupils or those in low attaining groups[19]. This has been fueled by a reduction in real terms in school funding for many institutions[20].

A typical OFSTED model of the structure of a lesson is as follows:

1. Plan the lesson beforehand.
2. Ensure the learning intentions are clear. Clarify the key skills and concepts to be learnt with links to prior and future learning and include a ‘hook’ that will engage and motivate pupils.
3. Identify and share the success criteria. This will support reflection and feedback and enable peer and self-assessment.
4. Assess prior knowledge, skills and understanding and amend the lesson if needed. Planned questioning at this point in the lesson is crucial to ensure that all pupils can make progress; for some there may be a need to recap for others there may be a need to move forward more quickly.
5. Keep the initial teaching session short. This should only last for about ten minutes for the whole class before they should use and apply their learning.
6. Give pupils time and the opportunity to actively engage in learning through problem solving, investigations and research.
7. Check for understanding and progress. At intervals throughout the lesson, recap or provide an additional challenge. This can be for the

whole class or groups. It is important to observe learners and intervene in a timely way.

8. Use descriptive praise to encourage and motivate learners. This provides a model for those who are less engaged or facing difficulties.
9. Allow pupils time to reflect on their learning; not just what they learnt but what helped them to learn and the strategies they used.
10. Evaluate their learning, recap on the success criteria, ask questions to assess progress and give feedback.[21]

Impact of International Testing

Despite the fact that pupils in all parts of the United Kingdom sit international tests almost a year earlier in terms of their chronological ages, English, Welsh, Northern Irish and Scottish schools are frequently criticized in the press for 'failing', on account of their standing in international tests such as PISA and TIMSS, when compared to regions and jurisdictions such as Shanghai, Malaysia and Singapore. However the reality is different and more complicated. England, for example, shows broadly similar levels of attainment to its Western European neighbours, such as France, Germany, Switzerland, Denmark, Belgium, Scotland and so on, which use similar approaches to education. Many regions at the top of the PISA league table rely heavily on parents paying for out of school tuition, or entering pupils more selectively for assessment[22]. Despite the obvious and enduring success of the education systems in the four nations, teachers and schools have been subject to heavy criticism in recent years, with a correspondingly negative impact on morale[23]. A subsequent loss of experienced professionals has meant that many young people are taught by non-specialists in upper secondary school.

Impact of Teacher Continuing Professional Development

We have seen a tendency in United Kingdom schools over the last decade to engage in relatively poor quality continuing professional development for teachers, and in doing so, adopt quasi-psychological approaches to teaching

and learning that have superficial appeal, but which cannot be reliably replicated. An example of this is the work of the US psychologist Carol Dweck, who has developed the concept of a 'Growth Mindset'[24], similar in many ways to the 'No Excuses' approach, which is one of the 'Five Pillars' of the KIPP Charter Schools group in the US[25]. We have also seen schools using 'Brain Gym'[26] to enhance neurological development, an expensive programme for which there is no scientific evidence for its effectiveness at all[27]. The use of approaches such as 'Growth Mindset' and 'No Excuses' puts the onus on the learner to comply very precisely with a top-down model of teaching and learning, otherwise forcing them to face the full consequences of failure, even at a relatively young age. In practice, when these techniques have been tested systematically, they are not always found to be reliable, and they can cause some children (and their parents) high levels of stress[28]. Therefore any supplementary education website such as Bitesize would do well to balance this trend, by encouraging learning in a more child-friendly and relaxed manner (as it does currently).

Homework Trends

Guidelines for England and Wales introduced by a previous Labour Government had suggested an hour of work a week for infants aged up to the age of seven, rising to half an hour a night for those in the final four years of primary education. But the guidance was later discarded in 2012 by the then Secretary of State Michael Gove.

In every school there are parents who would argue that their children do not receive sufficient homework, and others who would argue their children receive too much. Homework is officially optional in state primary schools, but almost all children will expect to be given an English or Mathematics worksheet once a week, with up to a week to complete it. In addition they often take home one or two reading books commensurate with their current level of reading, and they have to learn spellings and times tables from time to

time as well. They may have optional extension projects to work on in the school holidays.

In secondary schools across the four nations, homework loads can vary, but the general pattern seems to be two 20-30 minute homework tasks a night at the age of 11, rising gradually year by year to two hours total at the age of 16 and three hours a night at the age of 18. There is increasingly talk of using the concept of a 'flipped classroom' by asking pupils to read and practise materials in advance of the lesson, and then use time in school to consolidate knowledge, but this is not yet universal and relies on pupils being able to scaffold (structure and plan) their own learning very effectively at a relatively young age (this approach being more typical of universities and colleges). Its efficacy has not been proven[29].

Online Learning

Children are increasingly using online learning tools at home, for which their schools pay annual site fees. These include Mathletics[30] (mainly primary school), MyMaths[31] (secondary school) and Language Perfect[32] (mainly secondary school). These sites encourage memorization and drill techniques to underpin more general work carried out in the classroom. The competitive nature of many of these sites is regarded positively by pupils. (This can be in-class competition as well as more global competition against other young people not known to the pupil.)

In the short to medium term, we expect to see a growth in the use of online textbooks, as these are cheaper and more easily managed than their traditional print equivalents. This has already started to be the case in the United States and we have become aware of major publishers wishing to replicate this in the United Kingdom. While educationalists might have concerns about issues such as screen fatigue, and the intellectual and cognitive impact of shifting media in this way[33], commercial pressures are

such that use of online textbooks is likely to increase regardless of any research evidence suggesting that there may be a negative impact on learning.

Pupil Confidence

Pupils across the United Kingdom sometimes struggle to assess their abilities accurately. Many initially overestimate their scholastic abilities, and subsequently experience difficulties transferring to higher education, in terms of using libraries and online search facilities effectively, evaluating sources, critically analyzing texts, structuring academic writing and following extended arguments. Universities such as University College London (UCL) have put various transitional programmes in place to compensate for this[34]. For materials designed for school pupils, it is possible to learn from the successes of the university sector in supporting those with difficulties. Incorporating sample answers, both high scoring and low scoring, is a good way to encourage better self-appraisal, as is creating software that allows pupils to pretend to mark answers to see how this compares to an examiner mindset. Anonymised peer comparison of answers can also be a useful approach, if carefully moderated. Information must be made explicit.

Some pupils feel themselves to be under extreme stress and many experience serious mental health problems, which are sometimes relatively poorly supported by local Child and Adolescent Mental Health Services (CAMHS). Schools-based programmes aimed at addressing this, such as Social and Emotional Aspects of Learning (SEAL) have been subject to variable implementation and consequently vary in effectiveness[35].

Analysis of Current Bitesize

Key Stages 1 and 2

We have analysed the overall impression of the site, as we were not required to provide a detailed specialist analysis of each subject area.

Throughout the Key Stage 1 and 2 sites, with the exception of KS 1 Science, content appears relatively weak, in that it consists mainly of curated clips from BBC Schools programmes and little original material, with few opportunities for interactivity. (A link to a non-BBC subscription site is suggested if users want more interactivity). There is some suitable differentiation for the Scottish curriculum but the same problems apply here as well.

There are some significant functionality issues, which concerned us, but which could be improved with simple housekeeping. About a third of the film clips were not functioning on the day they were tested, or were duplicated in the various lists under subject headings, for example ‘My Naughty Little Sister’ under the English Reading for Pleasure ‘Humour’ category and ‘Lizzie Zipmouth’ under the English Reading for Pleasure ‘General’ category. A significant proportion of the clips were quite general and frequently pitched too high for the age group, suggesting categorisation needs revisiting, for example many of the KS1 Art activities and Design and Technology activities seemed unsuitable. We would question whether these even need to be on the site, as there is no assessment of these subjects in any of the nations at KS1 and the materials provided did not work well in terms of enrichment. One subject category – KS1 Geography – was empty on the day that it was checked and could have had an activity on map reading and co-ordinates, for example (such as creating or interpreting a Treasure map). The general overreliance on film clips would make engagement difficult for users in areas

with poor broadband access, particularly in rural England and Wales, and parts of Scotland.

Nearly all subject areas need enhanced use of carefully explained technical terms, more interactivity and simple knowledge and terminology checklists that introduce basic gaming techniques to memorisation activities, especially for Modern Foreign Languages, a simpler version of the Learner Guides elsewhere on the site. This needs to be the most extensive for England, Wales and Northern Ireland and to a lesser extent on the Scottish version. The KS1 Science site is doing this to some extent across the board, and is a good example of what the other KS1 and KS2 subject areas should be moving towards. Finally, for England, the development team needs to revisit the use of KS1 fonts, as some schools have moved towards systematic cursive fonts in both printed and written materials (not just when teaching handwriting), so it might be helpful to include a reference to this at least in the English section.

Key Stage 3, GCSE and above

This part of the site is a lot stronger. Very useful interactive learner guides start to be introduced, and this improves the quality of the educational experience. However the layout could be improved with some more imaginative graphic design, so the guides have a more interesting, contemporary appearance. Currently the layout style would deter some users. At the moment the font is rather small and traditional, and the content presented in a somewhat mundane manner. This is easily remedied. In terms of content and the level of understanding required, a general spot check of several subject areas across each nation indicated that it seemed to be largely suitable on the whole, and versioned appropriately. The Scottish Lifeskills Maths and the Welsh Numeracy qualification were covered well, for example, and the Welsh and Irish (Learners) categories were similarly useful (as far as we could tell as non-speakers). Scottish Highers are

accommodated, but in comparison International Baccalaureate revision materials are entirely absent, despite the increasing popularity of the qualification in England in particular. This represents a lack of parity.

General Recommendations for Bitesize

- English, Welsh, Northern Irish and Scottish pupils are all likely to be looking for higher levels of interactivity than might previously have been the case, with the ability to ask specific question of experts, engage with peers, and receive more tailored and personalised advice. This is most important for the English site, where there is little if any provision at the moment. However reliance on the smartphone application for interactivity excludes many young people in rural England, Wales and Scotland, or those with limited access to 3G, which also tends to be in deprived areas.
- Many English pupils will be expecting greater use of technical terms, but may struggle to apply these usefully in practice and require support.
- Teaching and learning approaches vary from postcode to postcode and the pupil body is highly fragmented. Therefore the site needs to go beyond the National Curriculum. It needs to reconcile a ‘core knowledge’ type approach that is becoming increasingly common in some areas, with a more autonomous, creative approach that adds educational value. Cross-referencing between the Scottish CfE-based site and the English, Welsh and Northern Irish sites with their National Curriculum core knowledge materials might be helpful here.
- Independent enquiry, effective study skills and good ergonomics should be encouraged where possible, with specific interactive tools or suggestions for activities.
- This is a time of great uncertainty in terms of assessment, which is having an impact on pupil morale, so clear and explicit information about current examination requirements, as well as advice on precise examination techniques, will be of great use to pupils and their parents. Animated examples could be useful in this context. There needs to be current links

to practise paper downloads where possible as well, for example from the DfE website for SATs, or from examination boards.

- In the medium term, it may be time to move towards a more personalised approach, with users being able to set up accounts and check which sections they have already covered, whether this is relevant to their national requirements, and how long they have spent working on the site in total, via metrics and tools specific to their engagement. We understand that there may have been a cross-BBC ‘My Knowledge’ folder capability in the past allowing this The inclusion of a tool such as this, coupled with greater personalisation, might link to the MyBBC initiative, which could in turn suggest links to scheduled television and radio programmes of interest, particular in the local region.

Notes

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