

advice

ICT, amenability and the BBC digital
curriculum service in Wales

Supplement 2

This is supplement no.2 to Becta's report to the DCMS: *ICT, amenability and the BBC digital curriculum service in Wales*. This supplement contains findings on amenability in those subjects to be resourced and launched by the BBC as part of its digital curriculum service in 2007. Findings on the amenability of subjects to be launched by the BBC in 2006 can be found in the annex to Becta's report to the DCMS, and in supplement no.1 of the report.

Becta would like to thank ACCAC for its assistance in the assessment of amenability in these subjects.

Findings on the following subjects are contained within this supplement:

Key Stage 1

Welsh (*first language*)

Welsh (*second language*)

Key Stage 2

Welsh (*first language*)

Welsh (*second language*)

Art

Mathematics

MFL

Thinking skills

Key Stage 3

Citizenship

English

History

Mathematics

Music

Religious Education

Science

Work-related education

Key Stage 4

Mathematics

Physical Education

Science

GCSE

Child development (*Home economics*)

Design and Technology

Drama

French

Geography

Leisure and tourism

Media Studies

Religious Studies

1a) Welsh (first language) at Key Stage 1

The nature of language learning is such that there is constant interplay between different skills. While it is possible to focus on one aspect of language learning at a particular time, other skills inevitably come into play; otherwise the language learning experience would be unnaturally distorted.

The learning outcomes for Welsh (first language) at Key Stage 1 are divided into three attainment targets: oracy, reading and writing. The outcomes (excluding range) have been examined for amenability. It should also be noted that in the Welsh Order, emphasis is placed on viewing, listening and responding to audio and visual stimuli, which is clearly of relevance to ICT and digital content (Welsh language viewing materials, for example).

In *oracy*, much of the skills section (2) might be considered non-amenable if taken in isolation and out of context. While it would be difficult to argue that all the outcomes under these headings could be taught via ICT, it is clear that ICT might be used to support and extend the learning. Furthermore, many of these requirements address key aspects of the subject, and describe 'holistic' or 'integrated' skills that are part of effective learning in the subject (for example, listening and responding). Given these considerations, it is appropriate to judge these learning outcomes as amenable to ICT.

At first glance, two outcomes would appear to be not amenable. These are requirements 2.6 and 2.10 in *Oracy*:

Tell impromptu stories, recite or sing nursery rhymes, verses, songs and poems (2.6) **and** speak confidently and clearly with appropriate pronunciation and intonation (2.10).

However, ICT-based resources might reasonably be developed that will support the teaching and learning of these aspects, for example, by stimulating interest, modelling possibilities and offering opportunities for reflection and analysis. Therefore these outcomes are judged to be amenable.

It should be noted that it is vital that all pupils experience Welsh as a 'live' interactive language used by many different individuals and groups in real time and in real contexts. Pupils also need to have real experience of handling printed texts of all kinds as well as experience of reading them on screen, and must be able to write on paper as well as on computer. The tangible and interactive aspects of working in Welsh are particularly pertinent to the teaching and learning in Key Stage 1, although by no means exclusively so. However, there are many contexts in which the programmes of study at all key stages are amenable to ICT, and might be enhanced through the use of ICT.

Measuring 50%

The requirements for Welsh as a second language form a set of holistic or integrated skills as described in section 4.3.4. As stated in section 4, much of the information required to establish the 50 per cent measures is contained in custom and practice and national expectation.

Becta will look to ACCAC for detailed advice when reviewing the BBC's commissioning plans for resources in Welsh as a second language.

Amenability statement

The following outcome is judged by Becta to be **not** amenable:

hold a pencil comfortably in order to develop a legible style in accordance with the conventions of written Welsh (2.9 Writing)

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purposes of this exercise and should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not, amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

1b) Welsh (second language) at Key Stage 1

The nature of language learning is such that there is constant interplay between different skills. While it is possible to focus on one aspect of language learning at a particular time, other skills inevitably come into play; otherwise the language learning experience would be unnaturally distorted.

The learning outcomes for Welsh (second language) at Key Stage 1 are divided into three attainment targets: oracy, reading and writing. The outcomes (excluding range) have been examined for amenability. It should also be noted that in the Welsh Order, emphasis is also placed on viewing, listening and responding to audio and visual stimuli which is clearly of relevance to ICT and digital content (Welsh language viewing materials, for example).

In *oracy*, much of the skills section (2) might be considered non-amenable if taken in isolation and out of context. While it would be difficult to argue that all the outcomes under these headings could be taught via ICT, it is clear that ICT might be used to support and extend the learning. Furthermore, many of these requirements address key aspects of the subject, and describe 'holistic' or 'integrated' skills that are part of effective learning in the subject (for example, expressing opinions and responding). Given these considerations, it is appropriate to judge these learning outcomes as amenable to ICT.

At first glance, two outcomes would appear to be not amenable. These are requirements 2.6 and 2.10.

Recite or sing Welsh poems and songs (2.6) **and** speak using correct pronunciation and appropriate intonation (2.10).

However, ICT-based resources might reasonably be developed that will support the teaching and learning of these aspects, for example, by stimulating interest, modelling possibilities and offering opportunities for reflection and analysis. Therefore these outcomes are judged to be amenable.

It should be noted that it is vital that all pupils experience Welsh as a 'live' interactive language used by many different individuals and groups in real time and in real contexts. Pupils also need to have real experience of handling printed texts of all kinds as well as experience of reading them on screen, and must be able to write on paper as well as on computer. The tangible and interactive aspects of working in Welsh are particularly pertinent to the teaching and learning in Key Stage 1, although by no means exclusively so. However, there are many contexts in which the programmes of study at all key stages are amenable to ICT, and might be enhanced through the use of ICT.

Measuring 50%

The requirements for Welsh as a second language form a set of holistic or integrated skills as described in section 4.3.4. As stated in section 4, much of the information required to establish the 50 per cent measures is contained in custom and practice and national expectation.

Becta will look to ACCAC for detailed advice when reviewing the BBC's commissioning plans for resources in Welsh as a second language.

Amenability statement

The following outcome is judged by Becta to be **not** amenable:

hold a pencil comfortably in order to develop a legible style in accordance with the conventions of written Welsh (2.9 Writing)

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purposes of this exercise and should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not, amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any age range in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

2a) Welsh (first language) at key stage 2

The nature of language learning is such that there is constant interplay between different skills. While it is possible to focus on one aspect of language learning at a particular time, other skills inevitably come into play. Otherwise the language learning experience would be unnaturally distorted.

The learning outcomes for Welsh (first language) at key stage 2 are organised into three attainment targets: oracy, reading and writing. The outcomes (excluding range) have been examined for amenability. It should also be noted that in the Welsh Order, emphasis is also placed on viewing, listening and responding to audio and visual stimuli which is clearly of relevance to ICT and digital content (e.g. Welsh language viewing materials).

In *oracy*, much of the skills section (2) might be considered non-amenable if taken in isolation and out of context. While it would be difficult to argue that all the outcomes under these headings could be taught via ICT, it is clear that ICT might be used to support and extend the learning. Furthermore, many of these requirements address key aspects of the subject, and describe 'holistic' or 'integrated' skills that are part of effective learning in the subject (for example, listening and responding). Given these considerations, it is appropriate to judge these learning outcomes as amenable to ICT.

At first glance two outcomes would appear to be not amenable. These are requirements 2.6 and 2.10.

Recite or sing Welsh songs and poems (2.6) **and** speak confidently, and develop their awareness of the contribution of pronunciation, intonation and gesture (2.10).

However ICT-based resources might reasonably be developed that will support the teaching and learning of these aspects, for example, by stimulating interest, modelling possibilities and offering opportunities for reflection and analysis. Therefore these outcomes are judged to be amenable.

It should be noted that it is vital that all pupils experience Welsh as a 'live' interactive language used by many different individuals and groups in real time and in real contexts. Pupils also need to have real experience of handling printed texts of all kinds as well as to read them on screen, and must be able to write on paper as well as on computer. The tangible and interactive aspects of working in Welsh are particularly pertinent to the teaching and learning in Key Stage 2, although by no means exclusively so. However, there are many contexts in which the programmes of study at all key stages are amenable to ICT, and might be enhanced through the use of ICT.

Measuring 50%

The requirements for Welsh as a second language form a set of holistic or integrated skills as described in section 4.3.4. As stated in section 4, much of the information required to establish the 50 per cent measures is contained in custom and practice and national expectation.

Becta will look to ACCAC for detailed advice when reviewing the BBC's commissioning plans for resources in Welsh as a second language.

Amenability statement

The following outcome is judged by Becta to be **not** amenable:

continue to develop legible handwriting using print and cursive writing (2.9 Writing).

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purposes of this exercise and should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may or may not be effective and appropriate.

2b) Welsh (first language) at key stage 2

The nature of language learning is such that there is constant interplay between different skills. While it is possible to focus on one aspect of language learning at a particular time, other skills inevitably come into play. Otherwise the language learning experience would be unnaturally distorted.

The learning outcomes for Welsh (first language) at key stage 2 are organised into three attainment targets: oracy, reading and writing. The outcomes (excluding range) have been examined for amenability. It should also be noted that in the Welsh Order, emphasis is also placed on viewing, listening and responding to audio and visual stimuli which is clearly of relevance to ICT and digital content (e.g. Welsh language viewing materials).

In *oracy*, much of the skills section (2) might be considered non-amenable if taken in isolation and out of context. While it would be difficult to argue that all the outcomes under these headings could be taught via ICT, it is clear that ICT might be used to support and extend the learning. Furthermore, many of these requirements address key aspects of the subject, and describe 'holistic' or 'integrated' skills that are part of effective learning in the subject (for example, listening and responding). Given these considerations, it is appropriate to judge these learning outcomes as amenable to ICT.

At first glance two outcomes would appear to be not amenable. These are requirements 2.6 and 2.10.

Recite or sing Welsh songs and poems (2.6) **and** speak confidently, and develop their awareness of the contribution of pronunciation, intonation and gesture (2.10).

However ICT-based resources might reasonably be developed that will support the teaching and learning of these aspects, for example, by stimulating interest, modelling possibilities and offering opportunities for reflection and analysis. Therefore these outcomes are judged to be amenable.

It should be noted that it is vital that all pupils experience Welsh as a 'live' interactive language used by many different individuals and groups in real time and in real contexts. Pupils also need to have real experience of handling printed texts of all kinds as well as to read them on screen, and must be able to write on paper as well as on computer. The tangible and interactive aspects of working in Welsh are particularly pertinent to the teaching and learning in Key Stage 2, although by no means exclusively so. However, there are many contexts in which the programmes of study at all key stages are amenable to ICT, and might be enhanced through the use of ICT.

Measuring 50%

The requirements for Welsh as a second language form a set of holistic or integrated skills as described in section 4.3.4. As stated in section 4, much of the information required to establish the 50 per cent measures is contained in custom and practice and national expectation.

Becta will look to ACCAC for detailed advice when reviewing the BBC's commissioning plans for resources in Welsh as a second language.

Amenability statement

The following outcome is judged by Becta to be **not** amenable:

continue to develop legible handwriting using print and cursive writing (2.9 Writing).

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purposes of this exercise and should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may or may not be effective and appropriate.

2c) Art at Key Stage 2

The learning requirements for art at Key Stage 2 are set out in three components:

- Understanding
- Making
- Investigating

It would not be appropriate (or possible) to undertake the teaching and learning of every aspect of art through the medium of ICT, particularly in terms of the range of experiences that should be available to pupils; for example, developing understanding of tactile qualities of materials could not be developed solely through the medium of ICT. However, it is the case that ICT-based resources might be used to consolidate, extend and apply learning and further develop ideas, for example:

Pupils should be given opportunities to use their experience and knowledge of different materials, tools and techniques experimentally and expressively.

Art, Key Stage 2, 2.2

ICT can support development (by modelling techniques, for example, or supporting investigation) of the inter-related skills. Furthermore, it is worth pointing out the holistic nature of the programme of study, and in particular the inter-relationships between the skills relating to understanding, investigating and making.

The requirements have been examined for amenability. Together, the requirements in the first group describe a set of inter-related 'holistic' skills of the type described in section 4.3.4. Since pupils develop these skills in the context of each other – for example, redesigning to take account of problems with making – to require the BBC digital curriculum service to deal with some of them, but not others, would be to require it to produce pedagogically unsound resources.

Measuring 50%

The requirements for art at key stage 2 form a set of holistic or integrated skills as described in section 4.3.4. As described in section 4, much of the information required to establish the 50 per cent measures is contained in custom and practice and national expectation.

Becta will look to ACCAC for detailed advice when reviewing the BBC's commissioning plans for resources in art.

Amenability statement

Based on both the inspection of individual outcomes and an assessment of the role of ICT in the holistic development of skills in Key Stage 2 art, Becta judges that there are no outcomes that are not amenable to ICT in the programme of study for Wales in art at Key Stage 2.

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purposes of this exercise and should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

2d) Mathematics at Key Stage 2

The *Using and Applying Mathematics* section in the mathematics programme of study at Key Stage 2 list sets of holistic or integrated skills. These lists are judged to be of the type described in section 4.3.4, for which good pedagogy requires that they should be taught and learnt in an integrated way. These then are considered to be amenable for the purposes of this exercise but, as detailed in section 4.5, will not be included when determining the question of 50 per cent coverage.

The remaining requirements have been examined for amenability. In its comment on amenability at Key Stage 1, Becta noted that appropriate learning and teaching requires first-hand physical exploration and experience of the real world as described (see section 4.3.3) as abstract ideas of number and shape are developed by learners through activities such as counting with real objects and handling real shapes.

This is still relevant to learning at Key Stage 2. However, the hands-on experience gained from the earlier key stage will clearly facilitate the learner's ability to develop, consolidate and apply current and new concepts through ICT-based resources.

There are, however, some outcomes where using and applying knowledge or problem solving would still most appropriately be done through a concrete, real-world experience.

Measuring 50%

The BBC may select up to 50 per cent of those outcomes judged to be amenable by Becta. For the purposes of determining 50 per cent, the *Using and Applying Mathematics* section is not included in the equation, as this would constitute double counting. Those judged to be not amenable are listed below.

Amenability statement

The following outcome is judged to be **not** amenable:

choose and use appropriate measuring instruments (Shape, space and measures 3.2)

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purposes of this exercise and should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

2e) Modern Foreign Languages (MFL) at Key Stage 2

There are no statutory guidelines for MFL at Key Stage 2 in Wales. However, the document *Making the link: language learning 5–14* provides general good practice guidelines on the development of skills, as well as on developing language learning skills for a new language. In addition, this document also identifies common skills from the Key Stage 2 programmes of study which are of particular relevance to MFL (pp. 11–12). These are drawn from the oracy, reading and writing sections of English and Welsh, and their relevance to language learning and MFL is clear, although where schools are delivering MFL in Key Stage 2, the emphasis is on oracy and pupils' skills in reading and writing are likely to be more limited.

The learning of Welsh as a second language is also relevant here, and Becta's findings on amenability of Welsh second language at Key Stage 2 are in part applicable to MFL in this key stage, although the coverage in MFL will be narrower than Welsh second language since most pupils will be new to MFL in Key Stage 2 (see Becta's statement on Welsh as a second language at Key Stage 2 for further details on amenability to ICT).

Measuring 50%

The requirements for MFL form a set of holistic or integrated skills as described in section **4.3.4**. As stated in section **4**, much of the information required to establish the 50 per cent measures is contained in custom and practice and national expectation.

Becta will look to ACCAC for detailed advice when reviewing the BBC's commissioning plans for resources in MFL.

Amenability statement

Please refer to Becta's statement on Welsh second language at Key Stage 2 above (note: outcome 2.9 on handwriting is not relevant to MFL at this stage).

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purposes of this exercise and should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

2f) Thinking skills, Wales, 5–11

There are three main ways in which thinking skills are currently taught in Wales:

- Teaching *of* thinking – direct teaching of generic thinking skills outside subject areas (stand-alone courses) such as Philosophy for Children, Accelerated Learning, Somerset Thinking Skills
- Teaching *through* thinking – this uses methods to promote thinking in subject contexts (stand-alone courses) such as Intervention programmes, CASE, CAME, Thinking through History
- Cross-curricular *infusion* – restructuring lessons in subjects to provide teaching of thinking skills, such as ACTS, Thinking for Learning (Cardiff LEA).

Thinking skills can be defined as patterns of thinking that help learners go beyond the mere recall of information and enable them to explore and make sense of their world, to reason and problem solve, as well as to plan, create and invent. Although we are all born with a capability to think, there is ample evidence that we can learn to think more skilfully. Thinking skills refer to processes of thinking and learning in a wide range of contexts, not just in school. Developing thinking skills is part of 'learning to learn'.

ICT can be a very useful and powerful tool in helping to develop quality thinking and learning, for example in developing decision-making skills and in developing questioning skills. Although there are differing views on how computers can be used most effectively in the development of thinking skills, it is clear that ICT has a role to play in developing the quality of thinking, whether as a tool, stimulus, or source of information.

Measuring 50%

Given that thinking skills is not a subject in its own right, for the reasons given in section 4.5 of Becta's report it is not appropriate to include these skills in determining the 50 per cent measure.

However, in its approach to thinking skills it is important that any additional subject content that the BBC might provide to support the development of thinking skills does not, in sum with any subject content already planned or provided in that subject and key stage, breach the limit of 50 per cent in total.

Amenability statement

Given the nature of thinking skills, it is appropriate to consider them as amenable to ICT for the reasons given in section 4.3.4 of Becta's report to the DCMS.

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purposes of this exercise and should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

3a) Citizenship at Key Stage 3

Although there is no curriculum subject entitled 'Citizenship' in Wales, elements of the PHSE curriculum as well as other guidance provided by ACCAC are relevant. Guidance on global citizenship has been issued (ACCAC, 2002). So while 'Citizenship' as a subject or curriculum strand does not exist in the curriculum for Wales, there are a number of elements grouped under that heading in various parts of the curriculum, in particular the PHSE framework for Key Stage 3.

The learning outcomes under the heading of 'community aspect' are particularly relevant:

- Understand the nature of local, national and international communities with reference to cultural diversity, justice, law and order and interdependence
- Understand the issues relating to democracy in Wales and know the rights and responsibilities of a young citizen
- Know how representatives (MEPs, MPs, Members of the National Assembly, Councillors etc.) are elected and what their roles are.

It should also be noted that ACCAC has also issued a guidance document *Sustainable development and global citizenship* (ACCAC, 2002) which further underlines the place of learning about concepts and issues to do with citizenship within the national curriculum for Wales.

Measuring 50%

Becta will look to ACCAC for advice assessing the BBC's commissioning plans in making the determination of 50 per cent.

Amenability statement

Within the relevant aspects of the Key Stage 3 PHSE framework (community aspect), Becta finds that there are no outcomes judged to be not amenable to being taught by ICT.

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purposes of this exercise and should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

3b) English at Key Stage 3

The learning outcomes for English at Key Stage 3 are divided into three attainment targets: oracy, reading and writing. The outcomes (excluding range) have been examined for amenability.

In oracy, much of the skills section (2) might be considered non-amenable if taken in isolation and out of context. While it would be difficult to argue that all the outcomes under these headings could be taught via ICT, it is clear that ICT might be used to support and extend the learning. Furthermore, many of these requirements address key aspects of the subject, and describe 'holistic' or 'integrated' skills that are part of effective learning in the subject (for example, listening and responding). Given these considerations, it is appropriate to judge these learning outcomes as amenable to ICT.

It should be noted that it is vital that all pupils experience English as a 'live' interactive language used by many different individuals and groups in real time and in real contexts. Pupils also need to have real experience of handling printed texts of all kinds as well as experience of reading them on screen, and must be able to write on paper as well as on computer. However, there are many contexts in which the programmes of study at all key stages are amenable to ICT, and might be enhanced through the use of ICT.

Measuring 50%

The programme of study at Key Stage 3 contains a large number of outcomes and, as such, provides a reasonable basis for measuring the 50 per cent in terms of amenable learning outcomes.

Amenability statement

There are no outcomes in English at KS3 judged by Becta to be not amenable.

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purposes of this exercise and should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

3c) History at Key Stage 3

The learning outcomes for history at Key Stage 3 are set out in five sections:

- Chronological awareness
- Historical knowledge and understanding
- Interpretations of history
- Historical enquiry
- Organisation and communication.

Together, the outcomes under these headings describe a set of inter-related holistic knowledge and skills of the type described in section 4.3.4 of *ICT, amenability and the BBC digital curriculum service in Wales*. Since pupils develop these in the context of each other – for example, *chronological awareness* in the context of *historical enquiry* – to require the BBC digital curriculum to deal with some of them but not others would be to require it to produce pedagogically unsound resources.

Measuring 50%

The requirements for history form a set of holistic or integrated skills as described in section 4.3.4. As stated in section 4, much of the information required to establish the 50 per cent measures is contained in custom and practice and national expectation.

Becta will look to ACCAC for detailed advice when reviewing the BBC's commissioning plans for resources in history.

Amenability statement

Based on both the inspection of individual outcomes and an assessment of the role of ICT in the holistic development of skills in Key Stage 3 history, Becta finds that there are no outcomes judged to be not amenable in the programme of study for Wales in history at Key Stage 3.

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purposes of this exercise and should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

3d) Mathematics at Key Stage 3

The *Using and Applying Mathematics* section in mathematics Key Stage 3 lists sets of holistic or integrated skills. These lists, which describe mathematical problem-solving and process skills, are judged to be of the type described in section 4.3.4, for which good pedagogy requires that they should be taught and learnt in an integrated way. These then are considered to be amenable for the purposes of this exercise but, as detailed in section 4.5, will not be included when determining the question of 50 per cent coverage.

The remaining requirements, (for *number, algebra, shape, space and measures and data handling*) which define the 'content' of mathematics, have been examined for amenability. At earlier key stages, appropriate learning and teaching requires first-hand physical exploration and experience of the real world as described in section 4.3.3. It should also be noted that at Key Stage 3, further avenues for the use of ICT are opened, as attested by the existence of a variety of sophisticated dynamic geometrical, graphical and symbolic algebra programs.

Measuring 50%

The BBC may select up to 50 per cent of those outcomes judged to be amenable by Becta. For the purposes of determining 50 per cent, the *Using and Applying Mathematics* section is not included in the calculation, as this would constitute double counting.

Amenability statement

There are no outcomes judged by Becta to be not amenable to being taught by ICT in the Key Stage 3 programme of study.

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purposes of this exercise and should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

3e) Music at Key Stage 3

The learning requirements for music at Key Stage 3 are divided into three broad themes:

- Performing
- Composing
- Appraising.

Together, the requirements under these headings describe a set of holistic skills of the type described in section 4.3.4. Since pupils develop these skills in the context of each other, for example, listening skills in the context of composing and performing, to require the BBC digital curriculum to deal with some of them, but not others, would be to require it to produce pedagogically unsound resources.

One requirement in particular, taken in isolation, would appear not to be amenable:

Sing an expanding repertoire of unison and simple part songs with increasingly sophisticated technique and with control of subtle changes within the musical elements.

Music, Wales, KS3, 1.1

However, ICT-based resources might reasonably be developed that will support the teaching and learning of singing, for example, by stimulating interest, modelling possibilities and offering opportunities for reflection and analysis. Therefore 1.1 is judged to be amenable.

Measuring 50%

The requirements for music form a set of holistic or integrated skills as described in section 4.3.4. As described in section 4, much of the information required to establish the 50 per cent measures is contained in custom and practice and national expectation.

Becta will look to ACCAC for advice when reviewing the BBC's commissioning plans for resources in music.

Amenability statement

Based on both the inspection of individual outcomes and an assessment of the role of ICT in the holistic development of skills in Key Stage 3 music, Becta judges that there are no outcomes judged to be not amenable in the Programme of Study for Wales in music at Key Stage 3 that are not amenable to ICT.

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purposes of this exercise and should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

3f) Religious Education at Key Stage 3

We refer to the document *An Exemplar Framework for Religious Education* (ACCAC, 2001) throughout this note.

In the exemplar programme of study, pupils are expected to be taught about beliefs, teachings, worship and fundamental moral questions amongst a variety of other things. All these aspects are deeply inter-related. We note that in order for children to be taught about

Traditional examples of religious, spiritual and moral experience and behaviour, as exemplified by religious founders, key leaders and adherents

It is likely that they will also explore

The life stories of key religious leaders, including some of the issues involved in conveying religious authority.

Equally, knowledge of religious buildings, celebrations, texts and customs will develop collectively. Taken together, the requirements of the exemplar programme of study at Key Stage 3 describe a set of holistic knowledge and skills of the type described in section 4.3.4. Since pupils develop these skills and knowledge in the context of each other, to require the BBC digital curriculum to deal with some of them, but not others, would be to require it to produce pedagogically unsound resources.

Measuring 50%

Becta will consult with ACCAC in assessing whether the BBC's detailed proposals for Religious Education at Key Stage 3 conforms with the 50 per cent measure.

Amenability statement

Based on the inspection of individual outcomes and an assessment of the role of ICT in the holistic development of skills in Key Stage 3 Religious Education (*An Exemplar Framework for Religious Education*), Becta finds that there are no outcomes in the exemplar framework judged to be not amenable to ICT.

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

3g) Science at Key Stage 3

The *Scientific Enquiry* section of the programme of study for science at Key Stage 3 lists a group of related holistic or integrated skills of scientific investigation. These lists are judged to be of the type described in section 4.3.4, for which good pedagogy requires that they should be taught and learnt in an integrated way. These then are considered to be amenable for the purposes of this exercise but, as detailed in section 4.5, will not be included when determining the question of 50 per cent coverage.

The remaining requirements have been examined for amenability. For many of these, appropriate learning and teaching requires practical experimental work; however, ICT can also support and extend practical work, for example through the use of simulations, as well as for use in consolidating, developing and applying understanding of scientific concepts.

Measuring 50%

The BBC may select up to 50 per cent of those outcomes judged to be amenable by Becta. For the purposes of determining 50 per cent, the *Scientific Enquiry* section is not included in the calculation, as this would constitute double counting.

Amenability statement

There are no outcomes judged to be not amenable in science at Key Stage 3.

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purposes of this exercise and should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

3h) Work-related education, 11–14

ACCAC published in 2001, *A Framework for Careers Education and Guidance* (11–19). This includes learning outcomes for Key Stage 3. This document sets out learning outcomes under three headings: *self-awareness and development*; *career opportunities*; and *career planning*. The learning outcomes from the framework for Key Stage 3 have been assessed for amenability.

There are a variety of ways in which ICT can support learning in the development of skills and knowledge in the learning outcomes, for example as a source of information, or as a tool to evaluate, record and present information.

Measuring 50%

Becta will look to ACCAC for detailed advice when assessing the BBC's commissioning plans for work-related education in determining the 50 per cent measures.

Amenability statement

Based on both the inspection of the learning outcomes and an assessment of the role of ICT in the holistic development of knowledge and skills in work-related education, Becta finds that there are no outcomes judged to be not amenable in the framework.

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purpose of this exercise and should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

4a) Mathematics at Key Stage 4

The *Using and Applying Mathematics* section in mathematics Key Stage 4 lists sets of holistic or integrated skills. These lists, which describe mathematical problem-solving and process skills, are judged to be of the type described in section 4.3.4, for which good pedagogy requires that they should be taught and learnt in an integrated way. These then are considered to be amenable for the purposes of this exercise but, as detailed in section 4.5, will not be included when determining the question of 50 per cent coverage.

The remaining requirements, (for *number, algebra, shape, space and measures and data handling*) which define the 'content' of mathematics, have been examined for amenability. At earlier key stages, appropriate learning and teaching requires first-hand physical exploration and experience of the real world as described in section 4.3.3. It should also be noted that at Key Stage 4, further avenues for the use of ICT are opened, as attested by the existence of a variety of sophisticated dynamic geometrical, graphical and symbolic algebra programs.

Measuring 50%

The BBC may select up to 50 per cent of those outcomes judged to be amenable by Becta. For the purposes of determining 50 per cent, the *Using and Applying Mathematics* section is not included in the calculation, as this would constitute double counting.

Amenability statement

There are no outcomes judged by Becta to be not amenable to being taught by ICT in the Key Stage 4 programme of study.

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purposes of this exercise and should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

4b) Physical Education at Key Stage 4

The effective use of ICT in the subject can support learning in PE rather than take away from learners' opportunities to practise and develop knowledge and skills through a range of activities. This is an important principle in the context of determining the amenability of learning outcomes within the PE curriculum to being taught via ICT.

The programme of study outlines the main areas of experience:

- Sport
- Dance
- Adventurous Activities
- Exercise Activities.

Also included is a programme of *health-related exercise* that is applicable to all the above areas of experience.

Some of the statements within the programme of study do not lend themselves individually to being taught via ICT ('perform dances showing control', for example). However, there is a variety of ways in which ICT can, support the overarching outcome of becoming a safe, competent swimmer, for example, through demonstrating techniques, supplementing verbal feedback and developing pupils' ability to observe, analyse and evaluate their work.

Measuring 50%

Becta will consult with ACCAC in assessing the BBC's coverage plans for Key Stage 4 PE in relation to assessing the 50 per cent coverage limit.

Amenability statement

Becta finds that there are no requirements that are not amenable to ICT in the programme of study for Key Stage 4 PE.

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purposes of this exercise and should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

4c) Science at Key Stage 4

The *Scientific Enquiry* section of the programme of study for science at Key Stage 4 lists a group of related holistic or integrated skills of scientific investigation. These lists are judged to be of the type described in section 4.3.4, for which good pedagogy requires that they should be taught and learnt in an integrated way. These then are considered to be amenable for the purposes of this exercise but, as detailed in section 4.5, will not be included when determining the question of 50 per cent coverage.

The remaining requirements have been examined for amenability. For many of these, appropriate learning and teaching requires practical experimental work; however, ICT can also support and extend practical work, for example through the use of simulations, as well as for use in consolidating, developing and applying understanding of scientific concepts.

Measuring 50%

The BBC may select up to 50 per cent of those outcomes judged to be amenable by Becta. For the purposes of determining 50 per cent, the *Scientific Enquiry* section is not included in the calculation, as this would constitute double counting.

Amenability statement

There are no outcomes judged to be not amenable in science at Key Stage 4.

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purposes of this exercise and should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

5a) Child development (Home economics) at GCSE

The learning requirements for child development (home economics) at GCSE are given in the specifications set out by ACCAC and approved for teaching by the regulatory authorities in Northern Ireland, England and Wales. The requirements have been examined for amenability.

The subject content of the specification covers four main areas:

- Social background and development
- Food for health
- Physical development
- Intellectual development

Clearly ICT can support the development of knowledge and understanding in the subject content, for example, by supporting investigation and the development of information for the content areas.

Measuring 50%

In this subject, the GCSE specifications (syllabuses) produced by the awarding bodies must be used as the basis for the determination of the 50 per cent.

Amenability statement

Based on both the inspection of learning requirements set out in the specifications and an assessment of the role of ICT in the holistic development of skills in GCSE Child Development, Becta finds that there are no outcomes judged to be not amenable in the specifications.

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

5b) Design and Technology (Resistant materials technology) at GCSE

The learning requirements for Design and Technology are set out in the specifications developed by ACCAC and approved for teaching by the regulatory authorities in England, Northern Ireland and Wales. The requirements have been examined for amenability.

Some of the requirements describe a holistic or integrated group of skills. Good pedagogy demands that these should be taught and learned in an integrated fashion and, for the reasons already given (see sections 4.3.4 and 4.5) these skills are not included in the list of learning outcomes against which the 50 per cent would be measured.

The remaining requirements, could in principle, be taught via ICT (but see the section on context below).

Measuring 50%

In this subject, the GCSE specification (syllabuses) produced by the awarding bodies must be used as the basis for the determination of the 50 per cent.

Amenability statement

Based on both the inspection of individual outcomes and an assessment of the role of ICT in the holistic development of skills in GCSE design and technology (resistant materials technology), Becta finds that there are no outcomes judged to be not amenable in the specifications.

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purposes of this exercise and should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

5c) Drama at GCSE

The learning requirements for Drama at GCSE are set out in the specifications developed by ACCAC, and approved for teaching by the regulatory authorities in England, Wales and Northern Ireland. The requirements have been examined for amenability.

In terms of content, candidates may choose two options from a list for coursework, one in relation to *scripted* work and the other in relation to *unscripted* work. There are a variety of ways in which ICT can support learning in this GCSE, including the planning and development of performance, as a means for research and stimuli, and to support learning within a range of areas available for study such as sets, costume, lighting and so on.

As with other subjects which include a significant performing element, the role of ICT is not to substitute for performance, but where used effectively is likely to support the preparation and delivery of performance.

Measuring 50%

In this subject, the GCSE specifications (syllabuses) produced by the awarding bodies must be used as the basis for the determination of 50 per cent.

Amenability statement

There are no outcomes judged to be not amenable by Becta in Drama at GCSE.

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

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In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

5d) French at GCSE

The learning requirements for French at GCSE are given in the specifications set out by ACCAC and approved for teaching by the regulatory authorities in Northern Ireland, England and Wales. The requirements have been examined for amenability.

Some of the requirements describe a holistic or integrated group of skills. Good pedagogy demands that these should be taught and learned in an integrated fashion, and for the reasons already given (see section 4.3.4), these skills are not included in the list of learning outcomes against which the 50 per cent would be measured.

The remaining requirements could, in principle, be taught via ICT (but see the note on context below).

Measuring 50%

In this subject the GCSE specifications (syllabuses) produced by the awarding bodies must be used as the basis for the determination of 50 per cent.

Amenability statement

Based on both the inspection of the learning requirements set out in the specifications and an assessment of the role of ICT in the holistic development of skills in GCSE French, Becta finds that there are no outcomes judged to be not amenable in the specifications.

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purposes of this exercise and should not be interpreted as a requirement or recommendations that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

5e) Geography at GCSE

The learning requirements for Geography GCSE are set out in the specifications set out by ACCAC and approved for teaching by the regulatory authorities in Northern Ireland, England and Wales. The requirements have been examined for amenability.

Some of the requirements describe a holistic or integrated group of skills. Good pedagogy demands that these should be taught and learned in an integrated fashion and, for the reasons already given (see section 4.3.4), these are not included in the list of learning outcomes against which the 50 per cent would be measured.

The remaining requirements could, in principle, be taught via ICT (but see the section on context below).

Measuring 50%

In this subject, the GCSE specifications (syllabuses) produced by the awarding bodies must be used as the basis for the determination of 50 per cent.

Amenability statement

Based on both the inspection of the learning requirements set out in the specifications and assessment of the role of ICT in the holistic development of skills in GCSE geography, Becta finds that there are no outcomes judged not to be amenable in the specifications.

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purposes of this exercise and should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

5f) Leisure and tourism at GCSE

The learning requirements for leisure and tourism at GCSE are set out in the subject criteria developed by ACCAC and approved for teaching in England, Northern Ireland and Wales. The requirements have been examined for amenability.

The requirements for leisure and tourism include the development of knowledge, understanding and skills relating to a considerable number of contexts including, leisure activities, tourist destinations, marketing methods and market research. ICT would clearly be a very valuable support to developing knowledge and understanding in all these areas of learning. The importance of the online medium to the leisure and tourism industries further underlines the amenability to ICT of the learning requirements.

Measuring 50%

In this subject, the GCSE specifications produced by the awarding bodies must be used as the basis for the determination of 50 per cent.

Amenability statement

Becta judges that there are no outcomes judged to be not amenable to ICT.

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purposes of this exercise and should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

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In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

5g) Media Studies at GCSE

The learning requirements for GCSE media studies are set out in subject criteria developed by ACCAC and approved for teaching by the regulatory authorities in Northern Ireland, England and Wales. The requirements have been examined for amenability.

Television, radio, film, popular music, and print media (the broad definition of 'mass media' in Media Studies GCSE) can all be studied with the support of ICT. In many cases these media are present in one form or another online, for example, the online editions of newspapers. Equally, forms of digital media that are specific to the online environments may also be significant objects of study. In addition, the role of ICT for presentation is also a significant opportunity.

It is very much expected that ICT be integrated into media studies, whether for use in investigating, presenting, recording or creating. Therefore, it is sensible to judge the specifications of GCSE media studies as amenable to ICT.

Measuring 50%

In this subject, the GCSE specifications (syllabuses) produced by the awarding bodies must be used as the basis for the determinations of 50 per cent.

Amenability statement

Based on both inspection of the learning requirements set out in the specifications and an assessment of the role of ICT in the holistic development of skills and knowledge in GCSE Media Studies, Becta finds that there are no outcomes judged to be not amenable in the specifications.

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purposes of this exercise and should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

Indeed, Becta recognises that a curriculum should not be learned or taught solely via ICT, as ICT resources alone do not provide the range of learning experiences that amount to a broad and balanced curriculum. Even where it may find a subject to be wholly amenable in relation to the learning outcomes considered, Becta does not wish to suggest or imply in any way that a subject could or should be resourced entirely by ICT. For all subjects, an appropriate balance should be struck between the time pupils spend at the screen and the time spent elsewhere.

In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

5h) Religious Studies at GCSE

There is no exemplar programme of study at Key Stage 4. However, religious education remains a basic curriculum requirement for learners at Key Stage 4 in Wales. Generally a course leading to a GCSE in Religious Studies will be offered. Therefore the GCSE specifications developed by ACCAC and agreed for teaching by the regulatory authorities in England, Wales and Northern Ireland have been examined for amenability.

Some of the requirements describe a holistic or integrated group of skills. Good pedagogy demands that they be taught and learned in an integrated fashion, and for the reasons already given (see section 4.3.4), these skills would not be included in the list of learning outcomes against which the 50 per cent would be measured.

The remaining requirements could, in principle, be taught via ICT (but see the note on context below).

Measuring 50%

In this subject, the GCSE specifications (syllabuses) produced by the awarding bodies must be used as the basis for the determination of 50 per cent.

Amenability statement

Based on both the inspection of the learning requirements set out in the specifications and an assessment of the role of ICT in the holistic development of skills, Becta finds that there are no outcomes judged to be not amenable in the specifications for GCSE Religious Studies.

In this case, as elsewhere, Becta's judgement on the amenability of learning outcomes is restricted to the purposes of this exercise and should not be interpreted as a requirement or recommendation that they should be taught or supported by ICT-based resources.

Context

For the purpose of fulfilling the DCMS remit, Becta has considered the question of ICT amenability of learning outcomes on a case by case basis, in order to judge which learning outcomes are and are not amenable in this context. Those judged to be not amenable lie outside the scope of the proposed BBC digital curriculum service.

Becta maintains that any judgements reached on the ICT amenability of learning outcomes are made for the purposes of this exercise only and are restricted to use in this context. Any judgements made by Becta do not imply that 'amenable' learning outcomes *should* be taught by ICT, nor do they imply any view on *how much* ICT is appropriate for any key stage in any subject.

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In addition, while a learning outcome may be judged amenable, it is still the case that any particular learning or teaching resource developed may, or may not, be effective and appropriate.

advice

experience

standard



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