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## **New qualifications**

July 2018



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## Introduction

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This report is in response to a request in the Cabinet Secretary's annual remit letter to Estyn for 2017-2018. It provides an overview on how schools and colleges are planning and implementing their curriculum after the introduction of the new GCSEs in English language, Welsh language, mathematics, mathematics-numeracy, and the Welsh Baccalaureate. It considers the quality of teaching and assessment, curriculum planning, staff development, and leadership. The report also includes practice that is worthy of consideration by other schools and colleges.

The intended audience for this report is the Welsh Government, senior leaders in schools and colleges, and officers in local authorities, regional consortia and other agencies. The majority of schools and all colleges visited during this survey were judged as good or excellent for standards in a core inspection since 2010.

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## Background

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In 2011, the Welsh Government commissioned a review of qualifications available to 14 to 19-year-olds in Wales. 'A Review of Qualifications for 14 to 19-year-olds in Wales' (Welsh Government, 2012). The review concluded that a single body (Qualifications Wales) should be established to regulate, approve and assure the quality of all qualifications (below degree level) available in Wales, bringing in a new and stronger approach to regulation.

The review highlighted concerns about literacy and numeracy and argued for changes in the structure and content of GCSEs in English language, Welsh language, mathematics and the Welsh Baccalaureate. These concerns were that:

- *'the levels of literacy and numeracy demonstrated by many learners are not high enough*
- *the current GCSEs in English language, Welsh language and mathematics are widely expected to be, but are not, reliable indicators of appropriate levels of literacy and numeracy. Some employers and universities consider that grade C, or even above, does not guarantee sufficient literacy or numeracy*
- *there is a view that there has been insufficient focus on the quality of writing in GCSE English Language*
- *controlled assessment is considered by many not to be appropriate for English Language/Welsh Language GCSEs. It is felt that a greater level of externality and control is desirable for these subjects'* (Welsh Government, 2012, p.40)

The review made 42 recommendations. Based on these, the WJEC, together with a wide range of stakeholders produced a revised set of specifications for teaching the Welsh Baccalaureate, mathematics, and mathematics-numeracy, English and Welsh

language. These became available for teaching in 2015 and were first awarded in the 2016-2017 academic year.

In the document, 'How qualifications in Wales are changing', the Welsh Government stated that 'From September 2015, English Language, Welsh Language, Mathematics – Numeracy and Mathematics GCSEs will assess learners on the same types of skills that the international PISA assessments test.' (Welsh Government, 2014, p.2).

### The Welsh Baccalaureate

In key stage 4, the Welsh Baccalaureate was first made available for teaching in September 2007. Its aims were to provide pupils with broader experiences than traditional learning programmes and to develop transferable skills that may be useful in higher education and employment. At this time, the programme consisted of the 'Core Studies' and 'Options'. The components of the Core Studies were:

- key skills
- Wales, Europe and the World (four elements and a language module)
- work-related education (working with an employer and a team enterprise activity)
- personal and social education (five elements)

In addition to the components listed above, all pupils had to complete a personal investigation and gain nationally recognised qualifications at an appropriate level. It was possible to gain accreditation at two levels, 'foundation' (level 1) and intermediate (level 2). Pupils were expected to keep a portfolio of evidence. Assessment of these and of the personal investigation was to be made by teachers in school. A small sample of pupils' work was then verified by the WJEC.

The 2012 review of qualifications recommended that 'a revised and more rigorous' Welsh Baccalaureate should be at the heart of the new national qualifications system that the review also recommended for Wales (Welsh Government, 2012).

In September 2015, a new specification for the accreditation of the Welsh Baccalaureate was made available. The revised Welsh Baccalaureate is based on a Skills Challenge Certificate and supporting qualifications. The Skills Challenge Certificate consists of four components:

- An individual Project, which accounts for 50% of the final grade
- Enterprise and Employability Challenge, which accounts for 20% of the final grade
- Global Citizenship Challenge, which accounts for 15% of the final grade
- Community Challenge, which accounts for 15% of the final grade (WJEC, 2016)

The combined outcomes of these determine whether the Skills Challenge Certificate is awarded at National (level 2) or Foundation level (level 1).

The supporting qualifications include GCSE in English language or Welsh language and GCSE in either mathematics-numeracy or mathematics. Pupils require a further three GCSEs, two of which may be equivalent qualifications. To be awarded the

National Welsh Baccalaureate, pupils must gain grades A\*-C in all five of the supporting qualifications. At Foundation level, pupils must attain grades D-G in these.

Qualifications Wales commissioned a review of the design and assessment model of the Skills Challenge Certificate, and its place within the Welsh Baccalaureate. This was published in April 2018 (Engeli, Daly & Davidson, 2018).

### English language and Welsh language

The 2012 review of qualifications recommended ‘that the new qualifications should provide greater assurance of literacy:

- *‘by building explicitly on the levels of literacy that are expected to be developed by the end of Key Stage 3 in response to the new Literacy Framework*
- *by placing significantly more emphasis on the quality and accuracy of writing and on core writing skills such as spelling, punctuation and grammar than the specifications that were taught from September 2010*
- *by being assessed predominantly through externally marked assessments that are consistent across Wales and between the two languages’ (Welsh Government, 2012, p.10).*

From September 2016, the new English and Welsh language GCSE from the WJEC is the only accredited course available in Wales for maintained schools.

The aims of both the new Welsh and English language GCSEs are to develop the skills and abilities needed for pupils ‘to take active and responsible roles in their communities, everyday life, the workplace and in educational settings’ (WJEC, 2014a, p. 6 & WJEC, 2014b, p. 7). The revised specifications include several of the features in the previous specifications. However, they include several new features. These include:

- examinations that are untiered
- examinations that are available in May or June with an additional resit opportunity in November each year
- no written controlled assessments; instead, controlled assessments are now focused entirely on pupils’ oracy
- a reduction in the amount that controlled assessments contribute to the final grade from 40% to 20% in English and from 60% to 30% in Welsh first language
- an assessment of pupils’ proficiency in accessing and retrieving information from a wide range of written and dynamic/digital texts
- a requirement for pupils to develop their proof reading and editing skills
- multiple choice questions, similar to those found in PISA tests
- one overall grade but also separate reporting for oracy, reading and writing

## Mathematics and mathematics-numeracy

The 2012 review of qualifications included the following recommendation:

*‘The Welsh Government should introduce, for teaching from 2015, two new mathematics GCSEs, one covering numeracy and the other covering aspects of mathematics techniques. The Numeracy GCSE should build explicitly on the levels of numeracy that are expected to be developed by the end of Key Stage 3 in response to the Literacy and Numeracy Framework. Both GCSEs should be:*

- *full, single-award GCSEs covering the full GCSE grade range*
- *assessed through externally marked examinations that are consistent across Wales’* (Welsh Government, 2012, p.10)

From September 2016, the new GCSE mathematics and mathematics-numeracy from the WJEC are the only accredited courses available to maintained schools in Wales.

Much of the content in GCSE mathematics and mathematics-numeracy is the same as the previous GCSE mathematics course. Mathematics-numeracy is designed to focus on the mathematics that learners will need in their everyday lives, in the world of work, and in other general curriculum areas (WJEC, 2017a). GCSE mathematics will develop aspects of mathematics needed for progression to scientific, technical or further mathematical study (WJEC, 2017b). There are a few notable differences from previous specifications, these include:

- Mathematics-numeracy and mathematics are only available in linear courses
- Examinations are available in November and June for both of the new courses
- There are now three tiers of entry: Foundation, Intermediate and Higher
- Examination questions in mathematics-numeracy examinations will include a greater emphasis on questions that are set in real-life contexts

## Preparation for the new GCSEs

The Welsh Government provided funding for support to schools to accompany the new GCSEs, including through WJEC, regional consortia and in direct procurement of teaching resources, such as ‘Teaching Assessment Materials’. The materials, produced by Aberystwyth University, are available bilingually on the Hwb platform. The WJEC also contracted Aberystwyth University to create sample assessment materials and other resources to accompany the new courses. Representatives from the regional consortia were also actively involved in this work, and each regional consortium was given funding for advisory staff, including experts in English, Welsh, mathematics and the Welsh Baccalaureate Qualification to support schools with resources and training.

## Early and multiple entries for GCSEs in Wales

In October 2017, Qualifications Wales published their report on early and multiple entries for GCSEs in Wales (Qualifications Wales, 2017a). In their position statement, they recommend that ‘The Welsh Government should consider making



changes to how school performance measures are calculated so that only the first grade awarded to a student counts towards a school's performance measures' (Qualifications Wales, 2017b). The recommendation was accepted by the Cabinet Secretary for Education on 16 October 2017, with the approach coming into effect for 2019 school reporting.

### Further education colleges

The review of qualifications recommended that all learners who have not gained grades of A\*-C GCSE English/Welsh first language and mathematics at age 16 should work towards achieving these qualifications as part of any full-time programme of study at 16-19 (Welsh Government, 2012).

Most learners attending GCSE resit classes in colleges have attained a maximum of a D grade in previous attempts. Many of these lack confidence in their ability. Learners in GCSE resit classes typically come from the full range of a college's partner schools and show a wide diversity of strengths and weaknesses. A few learners attend part-time provision or evening classes. These often include adult learners who have developed a range of learning strategies acquired from their life experience. A very few learners have already attained a GCSE A\*-C grade and aim to improve their grade to access higher level courses or further their careers.

The Welsh Government allocated one-off funding of £1.4 million in 2015-2016 as a contribution towards the cost of applying its policy on GCSE resits. The policy outlines that all school-leavers enrolling on a one-year further education course, and who obtained a grade D in GCSE English or mathematics, should study for and resit the relevant examination with the aim of securing a grade C or above. For two-year courses, the policy also applies to learners who obtained a grade E in English or mathematics.

In her annual remit letter to further education colleges for 2017-2018, the Cabinet Secretary for Education issued guidance for colleges clarifying that it is the Welsh Government's 'goal for all centres to work towards 100% adoption [of the Welsh Baccalaureate] by applicable learners by 2020' (Welsh Government, 2016). As a result, colleges have reduced the extent of their Foundation and National level provision to focus on groups of learners who did not complete the qualification at school but have a realistic prospect of completing the qualification within the challenging one year time frame. Programmes that typically include the Welsh Baccalaureate at National level include hair and beauty, engineering and motor vehicle engineering.



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## Main findings

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### Schools

- 1 In English and Welsh lessons, many pupils demonstrate strong oracy skills. However, a few are reluctant to contribute and do not develop their oral skills appropriately. Many pupils have suitable reading skills, but a minority lack competence in higher-order skills, especially those of synthesis in English and of comparison in Welsh. In general, pupils do not use and develop the skills of summary and synthesis frequently enough.
- 2 Writing is the least developed skill in both languages. In English, a minority of pupils continue to make too many basic errors and have a poor sense of audience. In Welsh, there are basic spelling and grammatical errors in the work of a minority of pupils.
- 3 In mathematics and mathematics-numeracy lessons, many pupils have a secure understanding of fundamental concepts and a majority have a firm grasp of algebra. A majority are confident in selecting appropriate methods to solve problems. However, a minority of pupils do not have a competent understanding of these concepts and struggle to solve problems effectively. A few pupils do not possess secure basic number skills.
- 4 In 2017, just over half of pupils successfully completed the skills challenge certificate at level 2 and just under 40% achieved the National (level 2) Welsh Baccalaureate overall. Around 30% of pupils were accredited with the Foundation (level 1) Welsh Baccalaureate. Substantially fewer pupils gained the very highest grades in this qualification than in English, Welsh or mathematics. Girls perform considerably better than boys (Welsh Government, 2017b). During their skills challenges, most pupils develop skills such as teamwork, personal organisation and time management. In many of these lessons, pupils develop their oracy, reading and writing skills suitably. Generally, pupils do not develop their numeracy or ICT skills well enough in Welsh Baccalaureate lessons.
- 5 In most cases, pupils are very positive about their English, Welsh and mathematics lessons. The majority feel well prepared for their examinations. A majority of pupils are broadly positive about the Welsh Baccalaureate qualification, although a minority are negative. Pupils' attitudes generally reflect the status that a particular school, especially its leaders, places on this course.
- 6 Most schools have redesigned their schemes of work to prepare pupils for the 'PISA style' questions seen in the new GCSE specifications. A majority of schools have made suitable adaptations to their teaching in response to the new specifications. However, there has not been enough planning to extend more able pupils, especially in the Welsh Baccalaureate qualification. Teaching is effective in many GCSE lessons and in the majority of Welsh Baccalaureate lessons.

- 7 Most subject leaders show enthusiasm for their subject and many lead their departments competently. The majority have a suitable understanding of how to evaluate learning and teaching in their department. A minority do not correctly identify weaknesses in provision, which restricts their ability to plan for improvement. In the majority of schools, staff are chosen to deliver the Welsh Baccalaureate mainly on their timetable availability, and there is too much variation in the enthusiasm and expertise among teachers delivering the course. The quality of leadership for the Welsh Baccalaureate is also too variable.
- 8 Most senior leaders have supported departments strongly in preparing for the new courses. Many senior leaders have increased the curriculum time for these subjects, especially for mathematics and the Welsh Baccalaureate. However, there has been a narrowing of the curriculum in many schools. For example, although nearly all schools include a suitable focus on literature as part of their English language and Welsh language lessons, the proportion of pupils following GCSE English or Welsh literature and other subjects has declined considerably since 2012.
- 9 Many schools enter pupils early for examinations. This strategy may be appropriate for the most able pupils and in ensuring that pupils at risk of disaffection or leaving the area before the end of Year 11 gain a qualification. However, large-scale early entry is expensive, disrupts the normal running of schools, and often results in pupils sitting examinations for which they are not fully prepared. Pupils often settle for the first grade they receive and do not continue with their studies in that subject. As a result, they frequently do not reach their full potential in terms of the grades attained or in their understanding.
- 10 There has been a wide variation in the quality of support for schools from the regional consortia, local authorities and the WJEC. In a majority of cases, feedback from schools indicates that there has been suitable support from the WJEC to deliver the new courses and to prepare pupils for the new examinations. However, in a minority of instances, schools feel that there has been a lack of clarity and consistency in this support. Schools are generally positive about the support provided by regional consortia. Overall, the system of support offered to schools has been successful in facilitating the transition to the new specifications.

### Further education colleges

- 11 Most learners consolidate their learning from school well and many make suitable progress in preparing for GCSE resit examinations in English and mathematics. The Welsh Government does not publish data about the outcomes of these examinations.
- 12 Most learners have positive attitudes to their work in their GCSE English and mathematics resit lessons. In general, colleges have planned well so that learners can study for and resit GCSE courses. There has been a substantial increase in the number of learners enrolled on GCSE English and mathematics, but not in GCSE Welsh programmes.
- 13 In their Welsh Baccalaureate lessons, most learners engage well with tasks and gain a useful range of skills that supplement their vocational skills. However, only a minority of learners would take the Welsh Baccalaureate qualification out of choice.

- 14 Most teachers have a strong rapport with the learners and maintain classes that are calm, well focused and conducive to learning and good behaviour. In a few lessons, teachers do not adapt their teaching sufficiently to meet the needs of all learners. As a result, lower ability learners struggle and higher ability learners are not are challenged enough. In general, colleges do not receive enough information from schools about learners' prior attainment for them to address specific areas for development in a timely manner.
- 15 Most Welsh Bacculaureate teachers receive appropriate training and understand the requirements of the specification well. However, only a minority have access to networks of good practice with other colleges or schools.
- 16 Senior leaders are committed to ensuring that learners have access to GCSEs in English language and mathematics and the Welsh Bacculaureate qualifications. In most colleges, roles, responsibilities, and lines of accountability in relation to the GCSEs are clear. There has been appropriate investment in recruiting new staff and training existing staff to deliver the new qualifications
- 17 Most colleges have effective self-evaluation procedures. However, in a few cases, self-evaluation does not result in an accurate picture of the quality of teaching, or of learning, especially in Welsh Bacculaureate classes

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## Recommendations

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### **Schools and colleges should:**

- R1 Challenge the full ability range and provide stimulating tasks that develop the resilience of learners
- R2 Ensure that learners improve their writing in English and Welsh
- R3 Have high expectations that all learners contribute orally especially in Welsh
- R4 Improve pupils' problem-solving skills in mathematics and in mathematics-numeracy
- R5 Develop pupils' higher-order reading skills in English, Welsh and mathematics and the Welsh Baccalaureate
- R6 Improve boys' performance in Welsh, English and the Welsh Baccalaureate
- R7 Help more pupils to gain the highest grades in the Welsh Baccalaureate
- R8 Provide better opportunities for pupils to develop their numeracy and ICT skills in the Welsh Baccalaureate
- R9 Consider carefully their staffing and timetabling for the Welsh Baccalaureate and the status they place on the qualification
- R10 Provide training for middle leaders to help them evaluate standards and teaching in their departments
- R11 Work together better to ensure that they have legal, secure, and comprehensive arrangements for sharing information about learners' prior attainments and to develop networks of professional practice

### **In addition:**

- R12 Schools should consider the breadth of their curriculum, including opportunities and encouragement to study English literature and Welsh literature
- R13 Colleges should increase the number of learners resitting GCSE Welsh language

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## Standards

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### Schools

#### English language

- 18 The overall standard of key stage 4 pupils' work, in books and in lessons, is very similar to that seen in recent years during the previous GCSE specifications.
- 19 Many pupils listen attentively to their teachers, although often not quite so well to each other. They are willing and able to offer appropriate verbal responses, most commonly in response to the teacher's questions. Classroom discussions are often lively with, for example, pupils able to offer tentative judgements on characters and their relationships in literary texts such as 'The Merchant of Venice' and 'Romeo and Juliet'. A minority of pupils provide clear, well-developed responses using a suitable vocabulary. A few provide sustained and very well-developed responses. They use a wide and often sophisticated vocabulary when discussing literary texts such as 'To Kill a Mockingbird' and in drawing parallels with recent events in Charlottesville, Virginia. In a few instances, more able pupils produce engaging speeches on topics ranging from animation in Disney films to Britain's departure from the European Union. A few pupils are reluctant to involve themselves in pair or small group discussion. As a result, they do not consolidate or extend their understanding of texts or develop their listening and speaking skills enough.
- 20 Many pupils have a suitable range of reading strategies that they use appropriately to support their learning. For example, they are able to skim and scan effectively to extract relevant information from articles on extreme sports. A majority are able to make measured choices of quotations to illustrate their views on literary characters such as Lord Capulet and Atticus Finch. However, a minority of pupils do not fully understand how to use quotes effectively to analyse and evaluate details in texts by the end of key stage 3. They are not able to extract relevant sections of texts precisely enough to illustrate their arguments.
- 21 A majority of pupils use inference and deduction well to enhance their understanding of literary and non-literary texts, for example by analysing how a text tries to persuade people to watch the Rio de Janeiro Olympics. However, a minority of pupils do not have a firm grasp of a range of reading strategies. Most commonly, they lack competence in higher-order skills such as inference and deduction, and particularly synthesis. These shortcomings persist often because pupils experience only a limited range of challenging and engaging literature. The new GCSE English language specification requires pupils to summarise and synthesise, and to distinguish between the two. However, there is not enough evidence of pupils using and developing these skills other than in targeted examination preparation exercises.
- 22 The standard of pupils' writing is generally weaker than that of their reading, which is weaker than their oracy. Many pupils understand well the purpose of their writing, to inform, persuade, describe or narrate, and the conventions of that writing type. Generally, they approach writing tasks with confidence, although a minority of pupils have a limited sense of audience. As a result, they make incorrect language choices and their writing lacks the correct tone.

- 23 A minority of pupils continue to make too many basic errors in their writing, such as the confusion of tense, selection of inappropriate homophones, and a general loss of control through comma-splicing (when a comma is used to connect two independent clauses) and the over-use of subordinate clauses rather than full sentences.
- 24 Pupils are now examined on their ability to proof-read a piece of writing. The majority of pupils do not take sufficient responsibility for proof-reading their own work, although this is often because there is no explicit expectation of them to do so. Similarly, the benefits of their revision of work through approaches such as 'directed independent review time' are often undermined because teachers do not revisit the pupils' responses in a timely or thorough enough manner. A minority of pupils struggle with exposition writing and are unclear about the focus required in certain writing tasks, especially when asking pupils to describe an occasion. This is often because the wording of specific tasks leads a minority of pupils to narrate rather than describe.

### Welsh language

- 25 In lessons, most pupils listen attentively and follow the teacher's instructions correctly. They work together well in pairs and groups in order to discuss, express an opinion, analyse and interpret a variety of topics and themes. Many offer extended and intelligent responses. Many pupils speak Welsh fluently and confidently, for example in intelligent discussions and analyses of the characters in the novel 'Yn y Gwaed' and interpreting the poem 'Y ferch yn y bar'. Many pupils use idioms confidently when responding to a range of literary pieces and use apt quotations to support their views. However, a few pupils offer only brief answers orally and do not elaborate. A few turn to speaking English in Welsh lessons. A very few pupils do not contribute orally during lessons. As a result, these pupils do not develop their oral skills and the quality of their expression is poor. This is often a result of low expectations by their teachers.
- 26 Many pupils are able to work well independently. These pupils deepen their learning through independent research for their individual oral presentation. Many pupils have a firm command of technical vocabulary.
- 27 Many pupils have effective reading skills. Many pupils use a range of reading strategies successfully to gather and present information for a range of purposes, for example about arguments in favour of organ donation, reasons for going to war, and the risks and advantages of social media websites.
- 28 Many pupils have effective analytical skills and are able to select and use relevant evidence from texts in order to support their views. For example, they edit text in order to compare and contrast two reading pieces about social media. Many pupils show the ability to justify their answers by discussing and comparing their statements. They produce responses that link with their developing ideas, evaluating the purpose, effect and reliability of texts. Many boys respond positively to the short and multiple-choice questions in the new specification. The few pupils who have higher-order analytical skills are able to infer different layers of meaning implicit in texts and interpret the author's possible intention. However, many pupils do not fully understand the type of response required in answering questions that ask them to analyse different viewpoints.



- 29 In general, pupils' skills in making comparison are not strong enough. Only a minority of pupils succeed in comparing two reading pieces skilfully. These pupils are able to identify the contrast between passages in terms of their purpose or message and can discuss how the pieces succeed in conveying their messages effectively. When trying to respond to comparison tasks, many make suitable use of strategies such as the 'three 'e'' mnemonic, namely 'enwi, enghreiffio ac esbonio' (name, example and explain). However, pupils frequently consider reading pieces separately rather than comparing them with each other.
- 30 Many pupils make strong progress in their Welsh writing skills. They are able to use wide vocabulary effectively and write correctly for a range of audiences by varying their language purposefully for various purposes, for example enriching an opening paragraph that described a 'squat' and refining the beginning of an article on war. Many pupils punctuate correctly and structure sentences and paragraphs logically. A majority develop a strong grasp of the language that allows them to write in a variety of styles and for different purposes. A minority of pupils have a good understanding of the language's natural syntax. They use experimental, sophisticated and challenging vocabulary when writing in a range of media.
- 31 There are basic spelling errors in the work of a minority of pupils. Common errors include failing to use a soft mutation after a preposition, incorrect conjugation of prepositions, incorrect selection of the gender of nouns, literal translation from English, and the difference between 'ei' and 'eu'. The lack of apostrophe is also common, such as 'or', 'ir', 'maer', 'rwyn', 'hin'. A minority of pupils are unable to transfer their understanding of grammatical/linguistic rules to their written work when writing independently. Many are unable to reach the higher marking bands in examination questions as their language is not accurate enough and their vocabulary is too narrow. This limits their ability to convey specific meaning and write robustly.

### Mathematics and mathematics- numeracy

- 32 Many pupils use a variety of mental and written techniques efficiently to solve a wide range of problems. Their understanding of concepts such as fractions, percentages, decimals and ratio is secure. This allows them to develop their understanding of more complex work, for example when studying topics such as compound interest, proportionality and calculating the original value of an item after a percentage change. However, a minority of pupils do not use their number skills well enough to justify and prove their methods and results. For example, they do not start by using simple checking strategies to estimate their answers, or to evaluate if their calculations are generating sensible answers. Often these pupils make unnecessary use of a calculator and accept that the answer displayed must be correct.
- 33 A few pupils do not have secure basic number skills. These pupils struggle with elementary mathematical tasks such as counting in multiples of 8, subtracting a number from 200 or calculating 30% of a quantity. As a result, these pupils often lack confidence in their ability in mathematics and make poor progress during lessons.
- 34 A majority of pupils have a firm grasp of algebra and confidently solve equations and manipulate algebraic expressions. They build effectively on this knowledge and



understanding to apply their skills in algebra to other contexts. For example, when using Pythagoras' Theorem, they re-arrange the equation to calculate the lengths of missing sides in triangles successfully.

- 35 A majority of pupils use a range of data handling skills competently. These pupils are able to interpret charts and graphs to identify and explain trends. They use the correct procedures to find the median and interquartile range from a cumulative frequency diagram. They develop and apply these skills effectively in a wide range of contexts.
- 36 The majority of pupils use a variety of problem-solving strategies to help them answer problems in different contexts. For example, they use numeracy grids or mnemonics such as RUCSAC (read, underline, choose method, solve, answer, check) to lead them through a series of steps. In general, pupils are more successful when the problem solving questions are at the end of a mathematics unit of work so they know which concepts and methods to use. The majority of pupils contribute effectively to class discussions about the methods they use and recognise that questions can often be approached using different methods.
- 37 In a few cases, pupils make outstanding progress over time. These pupils thrive on responding to problem-solving tasks that provide a suitably high level of challenge. They make connections quickly between topics and use their mathematical skills systematically to solve multi-step problems or those requiring them to adapt their method. Many of these pupils justify and prove their results with strong mathematical reasoning and this helps them to make consistently good progress towards developing more advanced problem-solving skills. They use their mathematical knowledge flexibly to recognise the concepts, skills and processes that they can use to help them solve the problem. When they encounter difficulties, they use a variety of strategies such as drawing a diagram or simplifying the problem to make further progress. As they work through the problem, these pupils monitor their own progress, reflecting on the methods used and critically appraising their work. They readily make effective use of trial and error techniques, and embrace the opportunities that making errors provides to help them to eradicate misconceptions. These pupils approach problems with confidence and have the ability to think and work independently.
- 38 A minority of pupils struggle with solving problems. These pupils often carry out mathematical and numerical procedures appropriately through supported learning. However, they find it difficult to think things through for themselves when solving problems because they lack a secure understanding of basic mathematical concepts, relations and operations. These pupils struggle to identify the appropriate strategies needed to solve problems that are set in real life contexts. This is often because they are given limited opportunities to practise these skills.
- 39 Many pupils express their ideas clearly, using the correct subject terms when working in small groups or participating in class discussions. These pupils demonstrate good evaluative skills and can provide justifications for their responses. However, a few pupils do not develop their communication and thinking skills well enough. Their contribution to classroom discussions is limited and they find it difficult to justify their ideas or articulate their thoughts clearly.

- 40 Many pupils convey their ideas logically in their written work. They make effective use of mathematical conventions such as writing each step on a separate line to show each step that they have taken. However, a minority of pupils' written communication is poor. These pupils do not follow mathematical conventions or they write only their final solution, omitting the method that they used. Pupils working in this way find it difficult to track where and how they have made errors.

### The Welsh Baccalaureate

- 41 In Welsh Baccalaureate lessons, many pupils write with suitable technical accuracy, and structure their extended writing appropriately. A few pupils write fluently and effectively at length, especially in the individual project, for example when discussing different countries' responses to extremism. These pupils demonstrate a sophisticated understanding of a range of viewpoints and construct well-balanced and sensitive written arguments that are supported by reference to source material. A minority of pupils do not make sufficient references to sources of evidence to back up the points that they make. These pupils often do not pay sufficient attention to the accuracy of their spelling, punctuation or grammar.
- 42 Many pupils demonstrate secure reading skills. They locate relevant information from a range of sources appropriately, such as when identifying different views regarding the value of wind turbines in energy production. A few pupils have well-developed higher-order reading skills. They use these skills, for example, to synthesise the main factors regarding different governments' policies towards gender equality. A minority of pupils do not develop their reading skills successfully in their Welsh Baccalaureate lessons. They do not learn how to identify key information well enough when analysing written sources, often just highlighting large blocks of text without discernment.
- 43 Many pupils do not develop their numeracy well enough through the Welsh Baccalaureate. They make only perfunctory use of statistical information, such as copying figures into simple tables without commenting on or interpreting the data. When given the opportunity, a minority of pupils exhibit a suitable grasp of numeracy in their skills challenge work. They use data such as nutritional information about a range of different foodstuffs to construct suitable graphs and charts and produce appropriate summaries of the key information that this data provides. A very few pupils demonstrate sophisticated mathematical skills when interpreting data, for example when evaluating the effectiveness of different educational systems by analysing examination performance.
- 44 Many pupils make little progress in the development of their ICT skills in the Welsh Baccalaureate. They spend too much time making very basic presentations, or use spreadsheet programs to produce simple bar graphs, for example to represent the proportion of 'yes' and 'no' responses to questionnaires. A few pupils develop their ICT skills well in Welsh Baccalaureate lessons. These pupils produce effective and sophisticated multimedia presentations to support their 'pitch' in the Enterprise challenge, or use a range of spreadsheet functions to support their analysis of data.
- 45 In Welsh Baccalaureate lessons, many pupils contribute appropriately to class discussion activities. A few pupils make particularly articulate and thoughtful

contributions that consider a range of views carefully, for example when discussing the moral arguments for and against war. In general, many pupils develop their oracy skills well in their skills challenge lessons. In particular, these pupils share and develop their ideas in regular group activities.

- 46 Most pupils develop their social and life skills well, especially through the challenge activities. These activities contribute positively to skills such as teamwork, personal organisation and time management. The skills challenges are effective in helping pupils develop their confidence through activities such as public presentations to local business people and coaching younger pupils.

### Further education colleges

- 47 National published data for GCSE resit pass rates and grade profiles are not available. Most learners consolidate their learning from school well and make suitable progress in developing their skills. They are aware of what they need to develop to attain their GCSE and many make appropriate progress in preparing for resit examinations.

### English language

- 48 Most learners listen attentively to their teachers and classmates. They participate well in class discussions and in one-to-one conversations with peers. A few learners, especially adult learners in evening classes, lead discussions with their peers confidently. They relate topics to their own experience, such as in discussions about the use of persuasive language in debates around college meals. A very few learners are reticent to contribute and their oracy skills develop slowly as a result.
- 49 There is a wide variation in the quality of written work. A few learners have poor handwriting and make frequent mistakes in spelling and the use of simple grammar rules, such as use of capital letters, commas and full stops. The majority of learners write legibly and generally accurately, use simple grammar rules effectively and employ an appropriate range of vocabulary. A very few learners write fluently and accurately and use a wide range of vocabulary. Many learners show strong development of their written skills as their course progresses. They develop an improved understanding of spelling strategies such as word-splitting and mnemonics. They use strategies to identify and correct their own mistakes, for example using dictionaries or mobile phone applications with increasing confidence.
- 50 Many learners complete tasks and exercises diligently and promptly in lessons. They engage with tasks with enthusiasm, such as writing descriptively or analysing texts to identify the use of persuasive language. Many learners complete homework tasks well and benefit from the extension activities and exam practice questions that these provide. However, a few learners do not engage with tasks in lessons well or make half-hearted attempts, and a few do not complete homework tasks regularly. As a result, these learners make slow progress and, for example, repeat the same spelling and grammar mistakes over time.

### Mathematics and mathematics-numeracy

- 51 In mathematics and mathematics-numeracy GCSE resit classes, many learners

enhance their understanding and ability to use the four rules of number. Learners generally use the same methods they have used in schools. These vary between schools, so learners in colleges are often exposed to alternative methods of calculation. For a few learners, this opens up fresh opportunities that provide them with the skills to solve problems correctly for the first time.

- 52 Most learners demonstrate a sound understanding of straightforward calculations related to measure and shape, conversions between fractions and decimals, percentages, probability and estimation. They apply simple calculation techniques demonstrated by their teachers. Only a minority of learners carry out more complex calculations independently, or use problem solving approaches confidently.
- 53 Many learners present their calculations logically and show their workings. A few learners do not show the stages of the calculation, or jump too quickly to the final answer. This hinders their ability to identify errors and improve their technique in future calculations. Many learners present charts and diagrams accurately and with precision, although a few show less care.

### The Welsh Baccalaureate

- 54 Most learners engage well with tasks that relate to their vocational interest and the requirements of the skills challenge or project. In these classes, learners develop and practise a useful range of skills which supplement their vocational skills. For example, engineering learners use the design process to research, develop and produce new products as part of their individual project. Hair and beauty learners develop realistic business plans for mobile salons.
- 55 In many cases, learners carry out activities that broaden their experience beyond their normal vocational programmes. For example, learners on an enhanced engineering programme show well-developed research, synthesis and presentation skills in an activity relating to life chances for children living in poverty, and quickly produce engaging presentations and discuss their findings. Hair and beauty learners study the ethics of hair extensions and the impact on young girls in areas of the world from which the hair is sourced.

## Learners' attitudes towards and impressions of the new qualifications

### Schools

#### The new GCSEs

- 56 Most pupils are very positive about their English, Welsh and mathematics lessons. Many are keen to do well in these subjects and maintain a high level of focus on their work. These pupils behave well and show respect towards the teacher and their peers. They display positive attitudes to learning and settle quickly to their work. In a few cases, pupils disengage from their learning. Often, this is because the tasks offered are repetitive or include an inappropriate level of challenge.
- 57 Many pupils are positive about the element of choice offered in their English language and Welsh language courses to choose the topic for their individual researched presentation from the five set themes as part of Unit 1. They feel motivated as a result of being able to select topics of interest to them.
- 58 Many pupils appreciate verbal and written feedback from teachers. In general, they feel that this feedback provides them with clear guidance on how to improve their work, especially when linked explicitly to examination requirements and technique.
- 59 A majority of pupils feel that they are being prepared well for their examinations. A minority find the approach to examinations stressful, especially with the weight of extra revision sessions. A minority of pupils do not feel well enough prepared for their examinations. This is especially true for those attempting their examinations early at the end of Year 10 or in November of Year 11.
- 60 Many pupils who are registered to sit their GCSE examinations early believe that it spreads the load of examinations and allows a subsequent focus upon areas of weakness. This is despite sitting up to 11 examinations in Year 10 and many pupils resitting all of the examinations they have already taken at the end of Year 11. A minority of pupils are not motivated to improve the grades they attained upon their first attempt and do not resit examinations. Around a half of pupils that resit examinations improve their outcomes by at least one grade. This suggests that the pupils who do not resit their examinations in the summer may not have reached their full potential.

#### The new Welsh Baccalaureate qualification

- 61 Pupils' attitudes towards their Welsh Baccalaureate lessons are highly variable and closely linked with the status that school leaders place on this course. Overall, a majority of pupils are broadly positive about the skill challenges and individual project. In a minority of schools, pupils have negative attitudes towards the qualification.
- 62 For many pupils, the most positive aspect of the skills challenge is that the activities provide them with experiences that are different from those in the rest of their

subjects, for example when they work with younger pupils or members of the local community. These opportunities help them to develop confidence and social skills. During these challenges, many pupils develop their time management, personal organisation and teamwork skills. Many of the pupils who continue their education in a school sixth form or further education college find that completing their individual project helps to prepare them for more academically demanding level 3 courses.

- 63 Most pupils welcome the level of independent choice that they have in choosing some activities and topics for study. However, the majority of pupils do not enjoy a few aspects of their skills challenge provision. They find aspects of the course repetitive, as different challenges include similar skills audits and personal reflections. They also feel that too much time is spent planning and reviewing activities at the expense of the activities themselves.
- 64 In general, pupils feel that there is an imbalance between the assessment weighting of skills qualification challenge and the personal investigation. This is because the effort and time needed to complete the three skills challenges is greater than in the individual project.

## Further education colleges

### GCSEs

- 65 Most learners who are studying GCSE courses in college are full-time learners who are also studying for other vocational qualifications. In many colleges, most learners demonstrate a good understanding of how their GCSE or pre-GCSE programme supports their wider studies. This includes why they are in a particular resit or pre-resit group, which qualification they are working towards, the outcomes of their initial skills assessment, and the aspects they need to develop.
- 66 Most learners who attend GCSE resit classes have failed previous attempts to attain a grade A\*-C at school or in their prior learning. As a result, many initially lack confidence in their ability to improve their grade. Nearly all appreciate the opportunity to resit their GCSE examinations and understand the value of the qualification. Many learners improve in confidence as their programme of study continues.
- 67 Most learners enjoy the experience of studying GCSE English or GCSE mathematics in college. They feel that they are treated as adults, with respect and with increased freedom, as well as greater accountability and responsibility. Most learners feel safe to say to teachers if they do not understand or to ask for clarification.
- 68 A few learners who have already attained a grade A\*-C at school resit the qualification to attempt a higher grade, in order, for example, to access a new main course at college with higher entry criteria or to give them access to a wider range of careers that require a higher GCSE grade. Many part-time adult learners who attend evening GCSE classes use the opportunity to attain an A\*-C grade, or improve their previous grade, to improve their career prospects.
- 69 The pattern of attendance at GCSE resit classes varies across colleges. In the most effective colleges, learners attend GCSE classes at the same rate as they attend



their vocational and other classes. The rate of attendance at GCSE resit classes is slightly below the overall college attendance rate. In addition, where both GCSE mathematics and English resit classes are timetabled on the same day, a few learners lose interest and their attendance drops.

- 70 Most learners behave well in class, and are engaged throughout the lesson. They interact well with their teachers and with their peers. In a few classes, especially those of longer duration, learners' concentration drifts and a minority become passive or distracted.
- 71 Many learners arrive well prepared for their classes, with appropriate equipment and their notes from previous classes. A few learners, and in a few colleges a minority of learners, do not bring their notes from previous classes, or fail to bring standard equipment to the lesson. This hinders their ability to reflect back on previous work, to review assessment comments or to fully consolidate learning from one week to the next.
- 72 Where colleges have timetabled learners from similar subject and vocational backgrounds to study in the same class, most learners enjoy the opportunity to study with their peers and develop their skills using some of the subject terminology of their vocational subjects.

### The Welsh Baccalaureate qualification

- 73 Many learners who are taking the Welsh Baccalaureate are motivated to complete their programmes and describe the potential benefits of studying the qualification, for example in developing skills of enterprise, planning and research. Hair and beauty learners value the business planning activities they carry out, and see their relevance to their future careers. While many learners recognise the potential value of skills they are developing, only a minority would take the qualification out of choice if it were not a compulsory part of their programme.
- 74 A minority of learners at a few colleges are under the mistaken impression that the Welsh Baccalaureate Qualification at National level (level 2) helps them directly in applications to university. While the qualification at level 2 may develop skills that universities value, it does not carry UCAS points that can be used in the application process. This is often as a result of poor advice and guidance from the college for learners on the status of Welsh Baccalaureate Qualification in higher education.



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## Learning experiences

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### Changes to the curriculum to accommodate the new GCSE specifications

#### Schools

- 75 Most schools re-wrote schemes of work at key stage 3 across all subjects, in response to the literacy and numeracy framework (Welsh Government, 2013). Recently, these schools have adapted these schemes to prepare pupils for the 'PISA style' questions found in the new GCSE specifications. Many Welsh departments and a few English departments have introduced schemes of work that focus more strongly on the technical aspects of each language and grammar. A few schools have adjusted schemes of work extensively in key stage 3 and key stage 4 so that opportunities to develop pupils' problem-solving skills build progressively as they move through the school and across all relevant areas of the curriculum.
- 76 Most schools have increased the curriculum timetable allocation for mathematics and numeracy at key stage 4 from about 12% to around 16%. This is to allow for the additional subject content for two GCSEs specifications and to give pupils sufficient opportunities to practise their problem-solving skills. A minority of schools have also increased the curriculum time for mathematics and numeracy at key stage 3 from about 12% to around 14%. This increase is to provide more time to focus on developing pupils' numeracy and problem-solving skills at an earlier age. In a few schools, the extra timetable allocation has resulted in a greater proportion of non-specialists teaching mathematics at key stage 3. In general, schools have not changed their allocation for English or Welsh in either key stage 3 or key stage 4 and this varies typically between 12% and 16%.
- 77 In key stage 4, many English, Welsh and mathematics departments have produced suitable schemes of work for the new specifications and many are continuing to develop these appropriately. In general, Welsh departments have adapted to the changes more smoothly than English or mathematics departments. This is because they are more familiar with specific administrative procedures, for example around recording pupils' oral responses for the controlled assessment and because of the quality of support from the WJEC subject officers and consortia. However, all departments have found adapting to the new specifications challenging. This was mainly due to uncertainties around the requirements for different grade boundaries and departments getting used to dealing with one examination board. Many schools have used well-received schemes of work that the regional consortia have prepared as starting points, tailoring them to meet the needs of their individual schools.
- 78 Most schools have retained their offer for pupils to follow English literature and Welsh literature. A few enter pupils for examination in these courses in Year 10. Many schools teach the literature and language specifications alongside one another, making effective use of the contexts offered by the texts. Nearly all schools are fulfilling the statutory obligation to teach literature as part of the language specifications. However, pressure from accountability regimes based on

performance measures has led many to enter mainly the more able pupils for literature examinations. This releases time to focus more strongly on the skills required to perform well in the language examinations.

- 79 In these schools, all pupils follow the literature course to some degree. However, schools enter a variable proportion of these pupils for the literature examination, depending on whether they are likely to gain a C grade or not.
- 80 In mathematics departments, the major changes are to provide increased opportunities for pupils to develop problem-solving skills for the new numeracy GCSE and for pupils to have a deeper understanding of mathematics concepts. In a few schools, there is particularly strong practice. These schools have adjusted schemes of work extensively in key stage 3 and key stage 4 so that opportunities to develop pupils' problem-solving skills build progressively as they move through the school and across all areas of the curriculum. These plans include providing the opportunity for pupils to try the following strategies:
- look for prompts such as a formula or mathematical term that gives pupils a starting point
  - use visual representation such as diagrams or bar modelling (pictorial representations of problems or concepts)
  - simplify a problem, and then transfer the method used from solving the simpler problem to the more difficult question
  - attempt tasks where there is no immediately obvious method
  - complete tasks where there is a lot of information and no question, with pupils required to state what use they could make of this information
  - discuss a ready prepared solution and ask them to analyse critically the method used, and look for alternative and more efficient methods
- 81 Many schools have introduced additional opportunities to support the development of the skills pupils require to succeed in English language, Welsh language, mathematics and mathematics-numeracy. These include the use of time in registration groups to address pupils' specific weaknesses and, most commonly, additional revision sessions, including during the school holidays. This practice often places undue pressure on staff and pupils as both lose a proportion of their holiday time.
- 82 Despite nearly identical specifications GCSEs in Welsh language and English language, only a very few English and Welsh departments have worked with each other to plan their new schemes of work and exploit potential synergies.

### **Case study 1: Cardiff High School – Curriculum planning for literacy skills**

Cardiff High School is an English-medium 11 to 18 mixed comprehensive school situated in the north of the city of Cardiff. There are 1,640 pupils on roll with around 7% of pupils eligible for free school meals, and around 14% with special educational needs.

Careful curriculum planning in key stage 3 and key stage 4 has resulted in the English department being able to recognise, understand, intervene and develop literacy skills successfully across the range of abilities.

All classes at key stage 3 have a timetabled hour to develop their reading with designated software every fortnight. The classes are set by bands of ability, so that the lower ability classes can receive three hours of explicit literacy support. These lessons are part of the pupils' English allocation so they are inconspicuous to the general population. All of key stage 3 are taught half a year group at a time so that staff have flexibility to move pupils into different classes as and when it is necessary.

At key stage 4, Year 10 and Year 11 pupils are taught half a year group at a time to ensure flexibility without affecting the rest of the curriculum. Also, the English and mathematics key stage 4 lessons are timetabled back to back so that, when necessary, the departments can 'borrow' time from each other in order to complete whole cohort intervention, such as controlled assessments and mock examinations.

All pupils in the school are taught GCSE language and literature separately. This allows staff to have more flexibility in their timetables so that the most experienced staff can teach more than one class at GCSE. This strategy allows for more clarity and a greater balance between the teaching of both GCSEs.

There is a strong focus on developing teaching practice within the classroom. Schemes of work support pupils' understanding of the quality expected for attaining the highest levels very well. Teachers endeavour to provide pupils with useful feedback that enables them to develop and progress. Schemes of work are adapted in order to ensure each child receives an appropriate level of challenge.

In 2017, at key stage 4, 91% of pupils gained a C and above in English language and 23.9 % gained grades A\*-A.

Pupils also attained very highly in their English literature GCSEs, with 95% gaining grades A\*-C and 36.1% gaining grades A\*-A (Welsh Government, 2017b).

### **Case study 2: Ysgol Bryn Elian – Curriculum planning for problem solving**

Ysgol Bryn Elian is an English-medium 11-18 mixed foundation school within Conwy local authority. There are 982 pupils on roll, including 170 in the sixth form. On average, around 16% of pupils are eligible for free school meals. Nearly all pupils speak English as their first language.

The department's vision for is for every pupil to enjoy mathematics and be able to succeed.

The department provides pupils with time to understand concepts and plans varied lessons with activities that ensure an appropriate depth of learning for all abilities. Problem solving strategies and practise form a significant amount of teaching time, so that pupils become able to link topics and apply different skills within each problem.

Over the last two years, the department has developed schemes of work for all years where pupils move at a pace that best suits their abilities and progress. This ensures that pupils progress to the next module when they have a firm understanding and are able to apply the topic skills confidently in a wide range of contexts. The department places a strong emphasis on pupils' enjoyment and engagement. They seek to build confidence at every opportunity.

The department separated the GCSE mathematics and mathematics - numeracy syllabuses into grades and then topics in order to form a scheme of work that progressively challenges the pupils. This was cross-referenced with the key stage 3 levels in order to focus on relevant skills from the beginning of Year 7. Staff focus on the development of pupils' higher order thinking skills, such as systematically exploring unfamiliar contexts, identifying and evaluating errors and misconceptions, and proving results with valid mathematical reasoning.

Each module begins with a 'pre-test' that gives the teacher a basis to plan a series of lessons. When the teacher believes that all pupils understand the work within the module well, they are given the opportunity to demonstrate their skills with an 'exit test'. The class will only move on to the next module once all pupils achieve a high level within the exit test.

In lessons, there is a significant emphasis on mathematical organisation, communication and writing. This makes pupils think carefully about the work that they are presenting and ensures that correct steps and methods are embedded from an early age. Pupils are expected to show all of their workings and therefore develop their ability to discuss and justify their approach.

Pupils currently in Year 7 are the first cohort to use the new fluid scheme of work and are already showing that a deeper understanding of the subject enables them to apply a number of skills in multi-step problems. They have a secure understanding of common misconceptions and are able to present their work in an organised, structured and accurate way.

### Changes to the curriculum in response to the new Welsh Baccalaureate specification

- 83 The way that secondary schools organise their Welsh Baccalaureate provision varies widely. However, most schools choose to deliver discrete Welsh Baccalaureate lessons, usually providing between an hour and an hour and a half of lessons a week. A very few schools offer up to two and a half hours a week. In general, pupils are more positive about their Welsh Baccalaureate provision and attain better when they have greater curriculum time to complete their work.

- 84 In many schools, there is not enough detailed planning to extend the more able pupils. In the few schools that do this successfully, teachers have very high expectations of what pupils can achieve. They offer pupils good support that allows these pupils to understand what is required of them to reach the very highest levels of attainment.

### **Case study 3: Ysgol Gyfun Gwŷr – Stretching the more able pupils in the Welsh Baccalaureate qualification**

Ysgol Gyfun Gwŷr is a designated Welsh-medium secondary school for pupils aged between 11 and 19 years. It is situated in Gowerton and serves the west of Swansea. There are 850 pupils on roll, and 5% are eligible for free school meals. A third of pupils come from Welsh speaking homes.

The school offers more able pupils a very high level of challenge. Teachers ensure that pupils are able to reach the very highest levels of attainment by providing them with detailed exemplification and tailored support to develop their skills.

The school gives pupils a high degree of freedom in their choice of personal investigation, which impacts positively on their motivation. More able pupils are encouraged to link their questions to future career choices. This raises their enthusiasm and personal motivation. The department guides pupils to explore more complex research sources. The school offers pupils a great deal of useful support when completing their investigations such as powerpoint presentations explaining how to use the more sophisticated functions in spreadsheets, referencing work correctly and interpreting data from graphs and charts.

The Harvard referencing system is taught through a series of lessons highlighting one way of referencing. It is made clear to more able learners that this is just one example and that others are also acceptable when writing an extended research essay.

Schemes of work support pupils' understanding of the quality expected for attaining the highest levels very well. Teachers provide pupils with sophisticated exemplars of questionnaire types and support pupils directly in setting out these charts in spreadsheets. Pupils are guided towards ways of gathering relevant data sets from organisations such as the Office of National Statistics, and are taught to question the validity of using a particular set of data unless it can support an argument.

The products of such processes have made for extremely sophisticated reading with an extremely individual response.

The provision has a direct impact on the level of analytical skills that more able pupils acquire. In 2017, 19% of pupils gained an A\* or A grade overall in the Skills Challenge Certificate (Welsh Government, 2017b).

- 85 Only a very few schools deliver the skills challenge through a cross-curricular approach. In these schools, pupils are prepared for the challenges through activities in, for example, religious education or personal and social education lessons. Pupils complete their individual project by investigating a topic related to the study of one of their examination courses. This helps pupils develop their wider skills while deepening their understanding of one of the subjects that they have chosen to study.
- 86 A minority of schools have introduced a key stage 3 version of the Welsh Baccalaureate, often called a 'Mini-Bacc'. This is generally undertaken in Year 9, although a very few schools are beginning to deliver this across the whole key stage. In many cases, this approach is useful in developing pupils' skills, especially planning, organisation and teamwork, and is helpful in preparing them for the key stage 4 skills challenge. In a minority of cases, the impact of this approach is limited by shortcomings in planning or insufficient time being allocated to the activities.
- 87 Many schools devote a series of full days, usually in the summer term, to the delivery of skills challenge activities. Most commonly, schools plan between two and four of these days, although a very few arrange up to 10 days. Usually, these days are used to accommodate the final, assessed activities in the Enterprise and Community challenges. This approach provides pupils with sufficient time to undertake meaningful activities. In addition, it helps schools to plan to use their expertise of partners, such as members of the local business community.
- 88 The majority of schools are successful in ensuring that their Welsh Baccalaureate provision focuses on the development of pupils' literacy. In particular, these schools give pupils useful advice on how to structure their extended writing when completing the individual project. In a few cases, teachers pay insufficient attention to the technical accuracy of pupils' writing. Many schools develop pupils' reading skills well, for example through developing their ability to analyse sources in the Global Citizenship challenge.
- 89 A few schools ensure that pupils' numeracy skills are developed well through the Welsh Baccalaureate. In these schools, teachers guide and support pupils to use a range of mathematical approaches to analyse, synthesise and summarise numerical data, especially as part of their individual project. However, in many cases, planning to develop pupils' numeracy skills is underdeveloped. This often because teachers involved in the planning and delivery of the course lack the necessary experience and expertise in mathematics.
- 90 In many cases, schools are successful in ensuring that pupils have sufficient access to ICT equipment to support their progress in the Welsh Baccalaureate. This helps pupils to, for example, carry out online research for their individual project. A few schools are effective in developing pupils' ICT skills through their Welsh Baccalaureate provision. In these schools, pupils are encouraged and supported to, for example, use advanced spreadsheet functions to analyse data or use multimedia software in their challenge presentations. However, in many cases, teachers do not extend pupils' use of ICT beyond that of basic word processing and simple presentations. This is often because the teachers involved lack expertise in ICT.



- 91 Despite the fact that the Wales, Europe and the World unit is no longer a part of the qualification, the majority of schools ensure that there is a strong emphasis on the culture and heritage of Wales in their delivery of the course. For example, these schools, ensure that pupils' individual project focuses appropriately on aspects of Welsh life. In a minority of schools, little consideration is given to the place of Wales within the world or to Welsh culture.

### **The impact of the new qualifications and performance measures on schools' wider curriculum**

- 92 Although schools are free to determine how they plan and deliver courses in key stage 4, a number of factors influence their curriculum offer. These include the introduction of the additional mathematics-numeracy qualification, the inclusion of the Welsh Baccalaureate to performance measures from 2018 and the focus on GCSEs in English language and Welsh language in the main performance measures. These factors contribute to schools' increasing curriculum time for mathematics and mathematics-numeracy, and the Welsh Baccalaureate. To facilitate this change, most schools have reduced the number of optional courses available to pupils. Most schools have reduced the number of options from four to three, and a very few only offer two. In many cases, subjects previously offered in more than one option block are now only offered in only one. Nearly all of the schools visited as part of this survey say that they have maintained their offer for pupils to follow GCSEs English literature or Welsh literature. However, the proportion of pupils sitting English literature and Welsh literature has declined by around 10 percentage points since 2012 (see appendix, figure 9). There have also been notable reductions in the number of pupils studying other subjects at GCSE, especially modern foreign languages, design technology, history and geography.

### **Changes to teaching approaches**

#### **Schools**

- 93 A majority of schools and colleges are adapting their teaching in response to changes to the new specifications. Most English, Welsh and mathematics departments recognise that the predictability of the examination papers under the previous specifications allowed teachers to prepare pupils almost rote-like for examinations. This is no longer the case as pupils now need to rely on their understanding and skills rather than on teachers 'programming' them in advance on how to respond to each specific question.
- 94 Many English and Welsh departments have increased their focus on the teaching of reading and writing skills. Most English departments plan to develop these skills within the context of literary and non-literary texts rather than by discrete teaching to past examination papers or decontextualised exercises. Many Welsh departments offer pupils greater linguistic support, for example through 'language mats' that include useful phrases and idioms, and success criteria to complete specific tasks. In general, the increased emphasis on the mastery of these skills has led to a lesser focus on literature and reduced variety. In addition, the greater emphasis upon technical accuracy has contributed to an increased marking workload for teachers. These trends extend into key stage 3.



- 95 English and Welsh departments are planning suitably to develop pupils' higher-order reading skills, particularly those of synthesis and summary. Many schools are developing their use of modelled answers to demonstrate to pupils what good quality responses look like.
- 96 Many mathematics departments are placing a greater emphasis on developing pupils' problem-solving skills. For example, teachers adapt the structure of lesson plans to teach the skills first and then giving pupils valuable opportunities to practise these skills in context during each lesson. Teachers in these departments use strategies such as problem-solving grids to help pupils recall the steps they need to take to solve problems. Overall, these strategies are successful, especially in improving pupils' ability to extract key information from problems.
- 97 In a minority of schools, arrangements for developing pupils' problem-solving skills and strategies in mathematics and numeracy are not strong enough. These schools do not plan for pupils to have worthwhile opportunities to develop and discuss mathematics in real-life contexts. In a few schools, staff who teach the new GCSEs have had little or no discussion about the changes that may be required in teaching and pedagogy in response to meeting the demands of the new qualifications.

#### **Case study 4: Cardiff High School – Developing a teaching style for the new mathematics qualification**

Cardiff High School is an English-medium 11 to 18 mixed comprehensive school situated in the north of the city of Cardiff. There are 1,640 pupils on roll with around 7% of pupils eligible for free school meals, and around 14% with special educational needs.

The department has always believed that teaching for understanding was important, but in 2013, the department identified many factors that would require teachers to put even greater focus on developing pupils' understanding of mathematics. These factors included the embedding of the literacy and numeracy framework, the introduction of reasoning tests and the new GCSE mathematics-numeracy. It introduced a plan to develop pupils' ability to reason mathematically and solve problems given in contexts.

The school began this journey by introducing reasoning lessons for each topic. The department developed its own resources as well as using resources that were already available, but more importantly placed a huge focus on pedagogy.

The school formed a triad consisting of head of mathematics, head of key stage 3 in mathematics and one other mathematics teacher to carry out research and trial teaching methods for developing reasoning skills.

Departmental meetings became a time for discussing what had worked well (and not so well) when delivering the reasoning lessons. Teachers observed each other delivering these lessons on a regular basis and through this process, the department refined its teaching methodologies with the aim of having consistently high quality teaching for understanding across the department.

As teachers became more confident in their ability to develop pupils' problem solving skills, they introduced elements of reasoning into their all their lessons

The focus on teaching and learning has been formalised. There are opportunities to share effective practice within the department by half termly peer observations and presentations in department meetings, as well as informal conversations. All department meeting time is dedicated to discussing teaching and learning, and sharing good practice. The department carries out all its administration work through a weekly emailed bulletin.

Schemes of work have been adapted so that topics are taught in gradual steps, thus building skills and understanding. Once pupils have mastered these skills, they are given opportunities to apply and further develop these skills in context or in multi-step questions.

Teachers use agreed methods to give pupils scaffolding / strategies for solving problems in context. Teachers introduce these methods throughout key stage 3 and this consistency of approach means that, by the time pupils reach key stage 4, they are confident in approaching problems that are set in context or need many steps to find a solution.

Teaching for understanding has become the philosophy of the department. The provision has impacted directly on outcomes in mathematics and numeracy, and results in external examinations have been consistently outstanding.

- 98 Teaching the Welsh Baccalaureate skills challenges requires a different set of skills from those needed to teach GCSE subjects. In a majority of schools, teachers understand how to organise pupils' project work and plan suitably to utilise pupils' skills. However, the ability and confidence of teachers in developing pupils' specific skills, especially those of numeracy and ICT, are too variable. In general, the quality of teaching is higher in schools where the course is planned and delivered by a dedicated, specialist team. In these schools, teachers are more enthusiastic about the course, they have a deeper understanding of the course requirements, and use a wider range of stimulating teaching materials and strategies.

### The quality of teaching and assessment

- 99 Teaching is effective in many of the lessons observed for this survey. In most cases, teachers are good language models and develop positive working relationships with their pupils, and the majority are enthusiastic about their subject.

### English

- 100 In the majority of lessons, there is a useful balance between the teacher's input and meaningful pupil activity, with helpful formative assessment and feedback. Teachers ask questions that probe pupils' understanding suitably and challenge them to develop their verbal responses appropriately. In a minority of schools, there is a

misconception that simply providing pupils with opportunities to use their existing oracy skills in paired and small group discussions will extend their skills, while in most cases it allows them only to practise what they can already do.

- 101 In general, teachers' interventions when pupils are talking in pairs or small groups focus upon what pupils say rather than how they say it. Teachers rarely offer pupils any guidance on how to improve their expression, extend their vocabulary or vary their intonation. For example, a discussion about the relationship between Lord Capulet and his daughter in 'Romeo and Juliet' supports pupils' reading skills more than developing their verbal responses.
- 102 Nearly all pupils are given plenty of opportunities to skim and scan and to use basic inference and deduction. However, outside of the study of literary texts, pupils generally do not receive enough challenging opportunities to develop their higher-order reading skills, particularly those of synthesis and summary, before they reach key stage 4.
- 103 Most pupils are given worthwhile opportunities to write for specific purposes though their sense of audience is not always addressed well enough. This deficit is not helped at key stage 3 by too many tasks not based on real-life situations such as asking pupils to 'write to an alien' or to 'join MI5'. Most pupils are given useful opportunities to write in different formats including formal letters to headteachers discussing the sale of 'Fairtrade' products in the school canteen, information leaflets for Year 9 pupils on options, and reports on lowering of the speed limit.
- 104 The development of pupils' writing is influenced significantly by the:
- time they are allowed
  - expectation for them to improve the technical accuracy and quality of their writing
  - quality of the teacher's feedback to guide them on how to develop their writing

#### **Case study 5: Ysgol Bro Hyddgen developing pupils' resilience in writing in examinations**

Ysgol Bro Hyddgen is a bilingual all-age school situated in the town of Machynlleth within Powys local authority. There are 490 pupils on roll, 200 of whom are in the primary department and 290 in the secondary department. About 44% of pupils speak Welsh fluently. Around 10% of pupils are eligible for free school meals.

The department's vision is to promote an environment where pupils are encouraged to learn from their mistakes. There is a strong focus on independent learning, and developing high quality extended writing, using clearly understood criteria in all schemes of work from key stage 3 onwards.

The department canvassed pupils' opinions on how they gave written feedback on extended writing produced under examination conditions and found that pupils did not consider re-drafting to be beneficial. The

department responded to this by establishing the principle that the first draft was to be the 'best' and final draft, as it would be under exam conditions. To support this, the building blocks in a lesson are always progressive with clear mini-plenaries to help pupils refine and develop their work, based on comprehensive success criteria. Pupils are always told to write within clear time limitations and that 'timing is key'.

The department has created writing success criteria, which are shared with all pupils from key stage 3 for developing extended writing in timed conditions. These are presented in pupil friendly terms on clear help sheets and on wall displays. Pupils must adhere to these success criteria and include all in their writing tasks.

**The GAP** acronym is used to remind the pupils to consider the 'Genre', 'Audience' and 'Purpose' of their extended writing task. Useful help sheets that summarise the **GAP** success criteria are displayed in books and on classroom walls.

When a written task is set, pupils write independently for approximately eight minutes. They then stop their writing and self-assess their work based on the clear success criteria noted above. In many classes, pupils set their own targets after they have self-assessed by highlighting and identifying what they need to develop in the next stage of their text. Pupils do not go back to refine. They carry forward with the improvements to the next section where they develop their written task.

As a result of these strategies, the department has noticed marked improvement in pupils' writing across the ability range, particularly in their resilience to write effectively in extended tasks.

- 105 The expectation for pupils to redraft written work has diminished in a minority of schools due to the perceived additional demands of current examinations and consequent time limitations. There is an over-reliance on tightly focused, but narrow, review methods such as 'directed improvement reflection time' (DIRT). Although useful, this method does not require pupils to review the content of their writing thoroughly or widely enough. This is exacerbated when teachers do not revisit the pupils' revised work so that neither the teacher nor the pupil know whether the work has been improved.
- 106 The majority of written feedback from teachers provides clear guidance on how pupils can improve the content and structure of their writing and points out areas within pupils' reading and understanding of various texts that needs to improve. However, a minority of feedback is too summative or effort related, (for example, where teachers comment mainly about a pupils' attitudes to learning but offer little insight into the aspects of their work they need to develop). Frequently this focuses only upon basic spelling, punctuation and grammar and says little about developing content. In addition, it is rarely matched to the abilities and needs of respective pupils.

- 107 Feedback on pupils' responses to examination-type questions is mostly secure and helpful. In the best cases it highlights specific strengths and areas for development such as improving the use of evidence and expression, and ensuring a clear address of the question. Crucially, the most effective feedback demonstrates an informed awareness of the abilities of respective pupils and avoids a 'one comment for all' approach.
- 108 A few schools use 'mini-plenaries' well, where pupils assess their own progress against clear success criteria based on mark schemes. These schools use this approach judiciously and avoid peer and self-assessment that are no more than perfunctory marking exercises and do not genuinely support learning. Frequently, this type of exercise benefits mainly the more able pupils, who have a sound understanding of success criteria that allows for the setting of meaningful short-term targets.
- 109 Where shortcomings in lessons are observed, it is frequently because the lessons are too teacher-led, as the teacher feels that pupils need constant guidance. This shortcoming often results in issues with the level of challenge and the pace of learning.
- 110 Despite a national focus on providing pupils with opportunities to develop their skills, a few schools still fall short in this area, particularly when trying to develop pupils' language skills through literature. An example of this is asking pupils to write a formal letter as if they were an itinerant farmhand. This improbable and contrived task does not provide the best opportunity to develop a suitable tone or sense of audience.

### Case study 6: Ysgol Bryn Elian – the development of pupils' skills

Ysgol Bryn Elian is an English-medium 11-18 mixed comprehensive school maintained by Conwy local authority. There are 950 pupils on roll, including 160 in the sixth form. Around 16% of pupils are eligible for free school meals.

The English department decided to pilot new approaches to teach pupils how to be critical readers and writers alongside explicit grammar instruction. The school's aim was for pupils to be more successful, in applying their skills to any text and question, while expressing their understanding clearly. Schemes of work are less outcome based and focus more on the mastery of skills. This strategy supports individual pupils better, rather than attempting to 'shoehorn' all pupils into an expected outcome irrespective of their ability.

The department also adapted their marking, assessment and feedback policy to allow for a variety of forms of marking, assessment and feedback with a clear focus on specific interventions and target setting to bring about swift progress.

The department has developed specific reading and writing skills based units to be taught at the beginning of each year. In Year 7 these are detailed units focusing on different reading skills, grammar and writing

skills. In later years, there are further modules to reinforce and refresh these skills. Common language and exemplars continually develop a learner's understanding and develop the skill further.

In key stage 3, the department has introduced the '200 word challenge' lesson to give students the opportunity to write every week. This is alternated with the explicit teaching of grammar to enable students to have the terminology and knowledge to apply to texts as they read and write themselves.

The department makes frequent and intelligent use of segmented data in order to provide specific, targeted interventions at both an individual and a class level, as highlighted in the data collections. For example, every half term, pupils in Year 10 and Year 11 complete a test. The data is input into spreadsheets, question by question and therefore, skill by skill, and then colour coded to highlight areas of development for each learner.

At key stage 3 and key stage 4 there has been a marked improvement in pupils being able to identify and apply different reading and writing skills. The department is beginning to see an improvement in writing outcomes, particularly at higher levels and grades, as students are able to master using specific sentence types, punctuation, text structures and organisation. Pupils are becoming more able to identify their own errors and ways to improve specific weaknesses.

## Welsh language

- 111 Many teachers have sound subject knowledge and a passion for teaching their subject. Nearly all of the teaching staff are very good language models. Nearly all manage pupils' behaviour positively and effectively in lessons.
- 112 In many lessons, teachers plan thoroughly and set high expectations for all pupils. Learning activities are stimulating and original, and engage pupils' interest and curiosity. In these lessons, teachers use a wide range of teaching resources effectively, including visual and sound media to put topics in context. They time tasks carefully and ensure that activities build on pupils' knowledge and skills.
- 113 Most teachers use technical language well in order to challenge pupils and extend their vocabulary. In the few very effective lessons, teachers question pupils skilfully and encourage them to use sophisticated language when responding. In these lessons, teachers focus strongly on raising standards of expression. They often begin lessons by examining common linguistic errors, challenging pupils to identify and correct these. In a few lessons, teachers do not remind pupils to speak Welsh in Welsh lessons. This is a significant shortcoming and hinders the development of pupils' fluency, inhibits their confidence and restricts their potential to reach the higher levels of attainment.
- 114 In a minority of lessons, teachers stick too rigidly to their lesson plans and do not respond flexibly enough to address issues as they arise. In these lessons, teachers do not plan well enough to meet the needs of the full range of ability. In particular, teachers do not give enough consideration raising the attainment of the most able



pupils as there are no opportunities that challenge them to meet the requirements of the higher marking bands. In a few cases, there is too much emphasis on completing workbooks, which hinders learning and inhibits opportunities to develop independent learners.

- 115 In a few schools, Welsh and English departments have a consistent approach for teaching analysing techniques so that pupils are immersed in the same methodology. This approach supports the development of pupils' analytical skills in both languages well.
- 116 In many lessons, teachers move around the classroom constantly in order to question and prompt pupils to justify their answers. They offer valuable and constructive comments that help pupils. A majority of pupils respond positively to these and make consistent improvements to the quality of their work.
- 117 The minority of teachers offer pupils useful written feedback on their work, which includes strengths and development targets. These often identify accurately areas for improvement. However, only in a few examples are pupils given regular opportunities to respond to these comments and improve specific aspects of their work. As a result, many pupils continue to make the same mistakes.

### **Case study 7: Ysgol Llanhari – the development of pupils' skills**

In September 2012, Ysgol Llanhari was expanded to provide education for pupils from 3 to 19 years old. The school has not yet reached its full capacity, and this year it has classes from Year 1 to Year 5, and Year 7 to Year 13. It has a total of 600 pupils: 400 in the secondary department, including 60 sixth form students, and 110 pupils in the primary department.

Forty-one per cent of pupils come from Welsh-speaking homes, but 90% are fluent Welsh speakers. Approximately 8% of pupils are eligible for free school meals. Nine per cent (9%) of pupils are on the school's additional learning needs register, which is lower than the national average. Very few pupils have a statement of special educational needs.

The Welsh department plans meticulously to offer a wide range of opportunities for pupils to develop their oral, reading and extended writing skills. They enter all pupils in key stage 4 for the GCSE Welsh language examination.

#### **Oracy**

Developing pupils' oral skills is an integral part of the department's work in key stage 3 and key stage 4. Pupils are given a range of stimulating tasks on various topics. They are given opportunities to gather evidence on these before discussing it in a group of three. Careful planning ensures that the level of challenge in these tasks increases over the years. The department places considerable emphasis on developing a natural tone to discussions. Pupils are supported strongly to develop the length of their presentations together with their skills of analysis across the key stages.



Teachers use high quality examples of individual and group oral work regularly, to strengthen pupils' understanding and knowledge of the examination requirements and help them set specific targets for improvement.

### **Reading**

Ensuring pupils' enjoyment of reading has a very high priority. The department uses opportunities from the GCSE literature course help to develop pupils' language. Nearly all pupils in key stage 4 study the set novel and sit the examination unit on a novel in the summer of Year 10. The department places an emphasis on reading the novel in its entirety before placing it in the context of an examination paper. The department plans to ensure that pupils acquire the skill of analysing questions and how marks are allocated in exercises to compare texts, beginning in key stage 3. This leads to improving pupils' persistence and perseverance when tackling extended questions and comparisons at an early stage. In addition, non-literary reading tests, probing questions and 'quick issues' are used to stimulate pupils' thinking and avoid overwhelming them with long pieces.

### **Writing**

The department offers pupils a clear structure of 'order, model and response'. It seeks to engage boys' interest with purposeful examples, regular modelling and concise exercises.

Across the key stages, pupils practise different writing forms regularly, often responding to timed unseen tasks. Teachers focus on language rules consistently, and 'correction exercises' form the basis for the beginning of each lesson.

### **Impact**

As a result of these strategies, many pupils have strong communication skills. They express themselves clearly by using extended vocabulary and correct syntax. Many pupils develop strong reading skills. Many pupils read aloud fluently and use relevant expression. The department's item level analysis of key stage 4 results in 2017 shows the candidates' persistence and perseverance, and nearly all attempted to answer nearly all questions on both examination papers.

## **Mathematics and mathematics-numeracy**

- 118 Many teachers know their pupils well and use this information appropriately to plan lessons with a suitable range of activities to meet the learning needs of pupils' abilities. These teachers establish efficient classroom routines and set high expectations for behaviour. This helps to maximise the time available for teaching and learning. They explain concepts clearly and skilfully, building their pupils' understanding and confidence in gradual steps.

- 119 Many teachers use questioning effectively, including beneficial techniques such as the use of mini whiteboards to monitor pupils' knowledge and understanding of topics. They encourage pupils to persevere and give valuable oral feedback, which helps them to make progress. A few do this expertly, involving the full range of pupils and questioning them skilfully to probe and extend their understanding. They often ask open-ended questions that require pupils to explain their reasoning.
- 120 In a few lessons, teaching is highly effective. In these lessons, teachers are extremely knowledgeable and enthusiastic about their subject, which helps pupils foster a deep interest in mathematics. These teachers have high expectations of their pupils and monitor their progress closely, encouraging them to think for themselves by asking questions such as 'can you tell me a bit more about your method?' and 'could you do this in a different way?'. They encourage pupils to select their own methods to solve problems and encourage discussion about the various possible methods in small groups or in whole-class discussion.

### **Case study 8: Ysgol Dyffryn Aman – developing pupils' ability to solve multi-step problems and problems set in context**

Ysgol Dyffryn Aman is a bilingual school maintained by Carmarthenshire local authority. There are 1,530 pupils on roll. Fifty per cent of pupils speak Welsh to first language standard. The school is located in Ammanford at the foot of the Black Mountains. The proportion of pupils eligible to receive free school meals is 19%

Following a series of lessons where pupils learnt the mechanics of using trigonometry and Pythagoras' theorem to calculate lengths and angles in basic shapes, the focus of the lesson was to use these skills in more challenging multi-step questions set in context.

The lesson began with a starter activity where pupils recalled the mechanics of calculating sides and angles using these methods. The activity re-enforced prior learning and linked directly to the main activity.

Planning for the main activity of the lesson was highly effective. Pupils worked in small groups to take part in a competition. Well-designed activities enabled pupils to develop their thinking and problem-solving skills. Each group received a number of trigonometry-based problems-solving tasks of various levels of challenge. Each task had a score with the more difficult tasks having higher scores. The groups of pupils chose which tasks they wanted to solve, with the group gaining the highest score winning the competition.

A particular strength was the use of a scaffolding grid, which encouraged pupils to show clearly their method and strategy for solving the problems, while supporting pupils when they encountered difficulties.

The teacher circulated around these groups, challenging the groups' ideas and carefully supporting their mathematical thinking. When pupils encountered difficulties, the teacher used skilful questioning techniques to enable pupils to see what steps were required to solve the problems, without telling them how to do it.

All pupils worked well with each other, the more able pupils providing effective support to others in the group. As a result, nearly all pupils made very good progress in their ability to solve challenging problems using Pythagoras' theorem and trigonometry.

- 121 A few teachers plan for pupils to self-select the level of challenge in activities. Pupils self-assess their progress and move quickly through work to attempt tasks that have an appropriate level of challenge. This approach builds pupils' confidence and independent learning skills extremely well. In these lessons, pupils often make rapid progress and show considerable enjoyment in their learning of mathematics. However, this method runs the risk of pupils choosing an inappropriate level of challenge.
- 122 There are shortcomings in a minority of lessons. This is most commonly because teachers do not plan lessons that challenge the full range of pupils sufficiently and offer them too many narrow or repetitive tasks. These lessons are conducted at too slow a pace so that pupils do not move quickly enough to more taxing tasks such as problems set in challenging contexts, those that require them to adapt their methods, or multi step problems. In a few lessons, teachers do not provide enough opportunities for pupils to think for themselves or collaborate with other pupils to share ideas and think their way through the problem together. In a few instances, teachers do not address pupils' misconceptions sufficiently. This leads to pupils making extremely limited progress in their learning.
- 123 Most teachers have suitable arrangements in place for marking and assessing pupils work, although the quality of written feedback is very variable. In the minority of schools where written assessment is most effective, teachers provide specific guidance on how pupils should improve their work, followed by purposeful tasks that require the pupils to respond to the teachers' feedback and address the areas that need improvement. However, in a few lessons, teachers give only the final answer to a question. This does not allow a pupil whose solution is incorrect to understand where they made an error and it encourages pupils to think that only showing the final solution to a question is acceptable.

#### **Case study 9: St. Joseph's Roman Catholic High School, Newport – Improving the impact of starter activities**

St. Joseph's Roman Catholic High School, Newport, is a voluntary-aided, mixed, 11-18 school, in the city of Newport and within the Catholic Archdiocese of Cardiff. There are around 1,450 pupils on roll. About 70% of these come from Catholic families. A total of 13% of pupils are eligible for free school meals.

The mathematics department has developed a culture of shared responsibility for the creation of high-quality resources to support and challenge of pupils' progression. Over the last three years, the department has developed over 100 different 'starters'. Each of these aim to develop the core skills needed to excel at a particular tier of examination.

These starters incorporate the 5 T's:

- Traffic lights
- Timed
- Topics
- Turnover
- Targets

**Traffic lights:** each starter is split in to red and green sections, which are differentiated depending on the prior attainment of the class and individual pupils ranging. For instance, if the starters are being used with a higher tier class, the red section will have questions aimed at grade C and B and the green section will have questions targeted at grades A and A\*. Typically, there are five questions in each section. Pupils are given the autonomy to start on any question and complete the questions in any order.

**Timed:** each starter is timed and pupils are given 10 minutes to complete as many questions as they can. This allows pupils to practise completing questions under timed conditions as in examinations, and this improves pupils' efficiency over time. In order to use time efficiently, teachers provide model solutions to the red questions after five minutes and only go through the harder green questions in detail once the time elapses. However, this is based on assessment for learning; if the teacher notices one or more red questions that have been answered poorly while circulating the room or questioning pupils, they will revisit these questions in detail also.

**Topics:** each starter is created from a selection of GCSE questions taken or adapted from WJEC examination papers. The topics in each task are not necessarily linked to content that pupils may have recently learnt in lessons. They require pupils to access prior knowledge, refer to their revision and reflect carefully on their previous work to answer all questions successfully.

**Turnover:** as the starter tasks are completed every lesson, they allow for a high turnover of topics. This allows pupils to practise topics they may not have studied recently and refresh their memory of topics and methods they may have otherwise forgotten. However, to ensure progress, similar questions are repeated in sequence. For instance, if a compound interest question is on a starter, a similar compound interest question will be on the next three to five starters. This allows pupils to practise the skill they may have struggled with at first and encourages mastery. The expectation during a series of starters is that pupils will achieve increasingly higher scores and rectify errors they have made previously.

**Targets:** at the end of each starter activity, pupils set themselves targets using 'what went well' and 'even better if' evaluation statements. Targets must be linked to the questions and topics that pupils have answered in that starter activity. The expectation is that ongoing homework will be focused upon revising the topics they have identified as weaknesses to improve their understanding in preparation to answering similar questions

in the next starter activity. Pupils and teachers can then monitor their progress in these topics through monitoring of increasing scores in the series of starter activities.

The initiative has helped contribute to develop:

- high quality and consistent teaching and learning across the department
- high levels of pupil progress in individual and sequences of lessons
- very strong and sustained performance by pupils at key stage 4
- strong skills development that encompasses thinking, self-reflection and self-correction

### The Welsh Baccalaureate

- 124 In the majority of Welsh Baccalaureate or skills challenge lessons, teachers plan for a variety of effective approaches and use resources that stimulate pupils' interest in their learning. These teachers have a sound understanding of the requirements of the qualification, set pupils clear success criteria, and ensure that they understand the purpose of tasks and their intended learning outcomes. They provide pupils with a range of examples to illustrate the intended outcomes of their work. They set high expectations and ensure that more able pupils understand well the criteria for attaining the highest outcomes.
- 125 In a minority of lessons, there are shortcomings in the teaching. In these lessons, teachers do not use a wide enough variety of approaches and they do not ensure that tasks are challenging or stimulating enough. In particular, they provide insufficient challenge to stretch the most able pupils. In these lessons, teachers do not provide pupils with enough clarity regarding the purpose of tasks. For example, pupils are often asked to complete a 'skills audit' as part of the preparation for challenge activities, but do not use the information from this audit during the activity or as part of its review. In these lessons, teachers do not exemplify what high-quality work looks like. As a result of the above shortcomings, pupils often become disengaged from their work and question the value of the qualification.
- 126 In the assessed parts of the skills challenge, the specification makes clear that teachers should not provide pupils with any specific individual guidance. Most schools set useful 'practice' or 'mini-challenges' to prepare pupils for the assessed activities. Where this is the case, the majority of teachers provide pupils with valuable advice and guidance on how well they are doing and how they could improve their work. In a minority of cases, teachers do not give pupils clear enough feedback on the quality of their work in these activities. As a result, pupils do not have a clear understanding of how well they are doing and this has a negative impact on their progress.
- 127 Where the teaching of skills challenge lessons is ineffective, this is often linked to:
- a lack of status given to the qualification by leaders
  - not enough curriculum time
  - shortcomings in training and support for teachers to deliver the Welsh Baccalaureate

### **Case study 10: St. Joseph's Catholic and Anglican High School – curriculum planning for the skills challenge certificate and Welsh Baccalaureate Qualification**

St. Joseph's Catholic and Anglican High School is the only shared church Voluntary-Aided school in Wales. It provides English-medium mixed 11 to 16 education within the Catholic Diocese of Wrexham, the Anglican Diocese of St. Asaph and the Wrexham local authority area. There are currently 709 pupils on roll. The proportion of pupils eligible for free school meals is 9.4%, with approximately 33% of pupils living in the 20% most deprived areas of Wales. Around 25% of pupils have English as an additional language.

At St. Joseph's, curriculum provision for the skills challenge certificate builds on the success of the previous specification for the Welsh Baccalaureate Qualification. Pupils had enjoyed a significant level of success previously, with one hour per fortnight timetabled in Year 11. When planning for the introduction of the new specification, the senior leadership team were clear that giving the skills challenge certificate more time would not be possible. Instead, time would be sought within existing subject areas or outside the formal fortnightly timetable. The final curriculum model and planning required the teaching and learning of the global citizenship challenge to begin in Year 9, delivered by history and geography teachers in their curriculum time (approximately 15 hours). The controlled assessment would take place over four collapsed timetabled days in the summer term.

The above model continued as the pattern for the remaining challenges, the teaching and assessment being delivered within personal and social education and physical education lessons. There were also a significant number of strategically placed collapsed timetable days in Year 10. In total, 14 collapsed timetable days during Year 9 and Year 10 are used to deliver the three challenges.

The 'project' element of the skills challenges is delivered at the end of Year 10 and throughout Year 11. This uses the one period per fortnight previously timetabled for the Welsh Baccalaureate Qualification and personal and social education and four collapsed timetable days. It is taught in mixed ability groups, predominantly by senior leaders teaching and learning responsibility post-holders. Where appropriate, subject specialists are utilised to ensure that opportunities in some key elements and assessment criteria are fully maximised. For example, mathematics teachers give workshops on statistical techniques required for higher marks.

Strategic oversight of the skills challenges is a responsibility of an assistant headteacher, who alongside two middle-leaders ensures that the teaching and learning elements of each of the four areas of the qualification are planned, delivered and assessed well. The school has strong quality assurance procedures to ensure that standards in each element are



marked according to the assessment criteria. Formative assessment takes place throughout the course, with high quality verbal and written feedback on areas for improvement. The summative assessment is undertaken for each cohort by one marker per unit, thus ensuring consistency of marking and significantly minimising internal moderation requirements.

At St. Joseph's, the commitment of staff, the support of parents and high levels of pupil engagement have all contributed to the school's success in this area. The 'buy-in' from staff and pupils is based on the value of the qualification and the benefits of experiences – particularly those challenges that build confidence, character and resilience.

The outcomes for the first cohort through the SCC qualification are extremely strong, with 88.6% of the full cohort achieving A\*-C grades and 30.3% achieving A\*/A grades.

## Further education colleges

### GCSEs

- 128 Overall, colleges have adapted their provision well in response to the recommendation of the Review of Qualifications that learners should study for and resit GCSE English, Welsh or mathematics examinations with the aim of securing a grade C (Welsh Government, 2012). This has resulted in a substantial increase in the number of learners enrolled on GCSE English language and mathematics programmes, but not GCSE Welsh language programmes.
- 129 The change in emphasis and scale of GCSE provision has caused colleges to reconsider how they deliver GCSE English and mathematics, and how they develop learners' literacy and numeracy skills more generally. Nearly all colleges have appropriate provision for learners entering the college with a range of prior attainments. Overall, colleges do not plan enough opportunities for learners to further practise and develop their skills through activities in their vocational programmes.
- 130 For learners who have not attained a D grade, many colleges offer 'pre-GCSE' programmes, designed to prepare learners to enter a GCSE resit course the following year. A few colleges use Essential Skills Wales qualifications in Communication and Application of Number as an alternative to pre-GCSE programmes. It is too early to tell which approach is the most effective in preparing learners for their GCSE resit programmes.
- 131 Nearly all colleges offer learners a suitable choice of GCSE English, mathematics and mathematics-numeracy resit programmes using the revised specifications. Most mathematics and mathematics-numeracy classes are planned for the intermediate examination tier, although a few higher tier classes are offered, generally as evening class provision.
- 132 A few colleges, such as Coleg Sir Gâr and Grwp Llandrillo Menai, offer GCSE Welsh resits, although uptake of these courses is low. A few learners resit their GCSE

mathematics through the medium of Welsh. In these cases, learners benefit from useful small group and one-to-one Welsh-medium tutorials to supplement English medium GCSE lessons.

- 133 Nearly all colleges have effective arrangements for assigning learners to the appropriate level of study. Nearly all colleges allocate learners into levelled groups, for example pre-GCSE or GCSE, and into groups broadly based on vocational area, for example engineers, or public services or hairdressing learners together. This allows teachers to tailor and contextualise their teaching material to appeal to the interests of learners with different subject backgrounds.

#### **Case study 11: Pembrokeshire college – ‘skills desk’**

Pembrokeshire College is a general college of further education and offers a range of further, higher, adult community learning and work-based learning programmes. The college receives learners from a wide geographical area including Carmarthenshire and Ceredigion.

At Pembrokeshire College, learners attend a dedicated ‘skills desk’ at enrolment. Staff record details of learners’ prior attainment, current programme, ‘initial assessment screener’ outcomes and other relevant information and assign them to a suitable class. This helps to ensure that learners are placed on the right level of course and are placed where possible on a course with learners from similar vocational backgrounds. This process also improves the efficiency of timetabling, staffing and room utilisation.

After about six weeks, teachers and managers carry out ‘right learner – right course’ reviews to ensure that learners are in fact studying on the appropriate course, with planned opportunities to move to a more suitable course if required.

- 134 Most colleges record and store information about learners’ prior attainment, and their outcomes from the WEST (‘Wales essential skills toolkit’) initial assessments appropriately. However, in general they do not receive enough detailed information from a learner’s previous school or from the Learning Records Service to allow teachers to focus their attention on specific areas for development. For example, in GCSE English, learners can carry forward results from some aspects of previous examinations from the oracy controlled assessment. In addition, there is valuable information from item level data from the examination units that would be helpful to teachers in knowing how well the learner performed. Where information about this is not passed on, learners may have to resit aspects of the examination in which they had previously attained well.
- 135 Most colleges timetable GCSE resit and pre-GCSE classes effectively, usually in blocks. As a result, learners can move between levels where appropriate. In general, timetabling is considerate of the needs and abilities of learners. However, the complexity of timetabling means that, in a few cases, learners with too wide a range of abilities end up in the same group.

- 136 In most colleges, teachers delivering GCSE programmes are well qualified for their roles and have PGCE or equivalent qualifications. A majority have a degree level subject background in either English or mathematics. Of these a majority have teaching experience in both the school and post-compulsory sectors. A minority of teachers do not have specialist degrees but have appropriate experience, typically as essential skills or literacy or numeracy teachers. These teachers normally receive suitable additional training and opportunities to gain relevant qualifications that allow them to move into a GCSE teaching role.
- 137 In many colleges, GCSE mathematics and English teachers work effectively as small teams of specialists, with a coordinator for each team. Communication between team members is generally effective and teachers share their materials and expertise usefully. For example, at Pembrokeshire College, GCSE co-ordinators produce a useful termly bulletin, which is circulated to all staff across the college and identifies the key English and mathematics topics being covered in the term. This allows staff in vocational areas to incorporate vocational opportunities for learners to practise current English and mathematics concepts in their wider learning.
- 138 It is a considerable challenge to cover the GCSE specification in one academic year. However, in most colleges, teaching for both GCSE English and mathematics is appropriately planned, using shared teaching resources and well-designed schemes of work.
- 139 In general, in both GCSE English and mathematics classes, teachers have a strong rapport with the learners and know their strengths and areas for development well. They maintain classes that are calm, well focused and conducive to learning and good behaviour. They provide clear explanations of concepts, activities and exercises, and make good use of individual, pair and small group work to promote learning, social and personal skills.
- 140 In the best examples, teachers:
- tailor their teaching effectively using contexts that appeal to the vocational interests of groups of learners while addressing the English or mathematics concepts in question
  - use findings from learners' skills assessments well to plan for effective learning. This allows them to teach the common areas as a class and to tailor further skills development to specific learners
  - share headline topics with learners in the form of a calendar; this allows learners to follow the development of their skills and to identify any areas they may need to review if they miss classes

### **Case study 12: Coleg Sir Gâr – gaining interests of specific groups**

Coleg Sir Gâr is a large general further education college with campuses at Llanelli, Ammanford, Gelli Aur, Pibwrlwyd and Jobs Well. The majority of learners live in Carmarthenshire, with significant numbers living in Pembrokeshire, Swansea and Ceredigion.

Coleg Sir Gâr attempts to organise GCSE resit classes so that learners from similar vocational programmes attend the same class together. This allows teachers to tailor their materials towards the vocational interests of the group, and at the same time practise and develop skills required for the GCSE.

For example, learners studying agriculture practise identifying persuasive language and imagery through analysing promotional materials for tractors and combine harvesters. This approach is successful in capturing the interest of nearly all learners, who then focus and engage well with the task.

- 141 However, in classes where there is a wide range of prior attainment, teachers do not adapt their teaching sufficiently to meet the needs of all learners. As a result, lower ability learners struggle and higher ability learners are not challenged enough.
- 142 In a few colleges, teachers do not set sufficiently high expectations of learners. In these a minority of teachers accept too readily that learners come ill-prepared for their lesson. For example, they do not challenge learners when they fail to bring their previous week's work or attend without the relevant equipment.
- 143 In a few cases, teachers rely too heavily on step-by-step tasks and do not develop learners' independent or problem-solving approaches to applying concepts enough.

### The Welsh Baccalaureate

- 144 In colleges, the majority of teachers teaching on Welsh Baccalaureate programmes are vocational specialists with a strong background in their discipline. These teachers have good rapport with their learners and value the additional skills that the Baccalaureate intends to provide. Most teachers have received appropriate training and understand the requirements of the specification well. However, only a minority of teachers have access to networks of good practice, or high-quality shared resources.
- 145 Many teachers plan activities well to appeal to the vocational interests of learners in their groups and link skills challenges and individual projects effectively to their main programmes. For example, hair and beauty learners develop business plans for mobile salons, engineering learners use aspects of the design process to develop and manufacture products, and motor vehicle learners develop 'workshop manuals' to carry out vehicle maintenance operations.
- 146 Most teachers provide effective one-to-one support and individual feedback to learners as they work on the preparation for their skills challenges. However, the time consuming nature of the assessment means that learners' opportunities to practise and develop their skills before being assessed are limited. In addition, it is difficult to complete all of the challenges within the one year available for level 2 programmes in a college.

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## Leadership

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### Schools

- 147 In general, there has been appropriate planning for implementation of the new GCSE and Welsh Baccalaureate specifications. In most schools, senior leaders have supported a wide range of initiatives to facilitate this planning. These include allocating time for subject leaders to write new schemes of work and increasing the time for departmental meetings. In a few cases, departments have created valuable partnerships with other schools to collaborate as they prepare resources for the new courses.
- 148 Most subject leaders show enthusiasm for the teaching of their subject and many provide their departments with competent leadership. Many are positive about changes to subject specifications. They are continuing to develop their teaching strategies appropriately to respond to these. Many subject leaders have been cautious in implementing changes to key stage 4 schemes of work. This caution is the result of a perceived lack of clarity in messages around assessment from the WJEC and the ongoing, limited availability of resources and standardised materials.
- 149 The majority of English, Welsh and mathematics leaders work closely with members of their department as they continue to implement and develop their provision. They set high expectations for the standards pupils are to achieve and strike a good balance between supporting and challenging the teachers within their department. Departmental meeting time is used effectively to drive priorities such as improving the quality of teaching and raising the pupils' standards. In these departments, the most recent examination outcomes have not changed much or they have improved. In a minority of cases, however, subject leaders have not ensured that teaching in their department has adapted well enough to suit the changes in the new examinations. In these departments, examination outcomes have dipped dramatically.
- 150 The majority of English, Welsh and mathematics leaders understand well how to evaluate standards and the quality of teaching in their department. They gather a wide array of useful evidence from lesson observations, scrutiny of pupils' work, talking with pupils and analysing examination data. They make good use of information from these activities to plan for improvement and set themselves challenging targets. In a minority of cases, middle leaders do not understand how to collect useful information from lesson observations or do not link their evaluation of teaching with the progress pupils make in lessons and the standards they attain. As a result, they do not correctly identify areas for improvement and this restricts their ability to plan strategically.
- 151 In all schools, senior leaders understand the fundamental impact that outcomes in GCSE English language, Welsh language, mathematics, and the Welsh Baccalaureate have on the school performance measures. As a result of pressure from these, many senior leaders have responded by increasing the curriculum time

for mathematics and the Welsh Baccalaureate and appointing additional teachers in these areas. There has been a narrowing of the curriculum in many schools as a result.

- 152 Pressure from the performance measures and uncertainty around assessment have also led leaders in many schools to employ early entry. This strategy can be appropriate for the most able pupils who have gained mastery of all aspects of a course and need further challenge, for example by studying 'additional mathematics' at GCSE. It may also be a suitable approach to ensure that pupils at risk of disaffection, or those that may leave the area before the end of Year 11, gain a qualification.
- 153 Entering pupils early for examinations is expensive, in a few cases costing more than employing a full-time teacher. Early entry also disrupts the normal timetable of schools because of intense preparations for these examinations. In many cases, pupils are sitting examinations for which they are not fully prepared, as they have not completed the course. In too many instances, pupils settle for the first grade they receive and do not continue with their studies in that subject until the end of Year 11. As a result, these pupils often do not reach their full potential.
- 154 Where the Welsh Baccalaureate is successful, there is strong support from the headteacher and other members of the senior leadership team for the qualification. Where this is not the case, it has a significantly negative impact on the capacity of the Welsh Baccalaureate co-ordinator to plan effective provision and secure good outcomes for pupils at key stage 4.
- 155 The role of the Welsh Baccalaureate co-ordinator varies considerably from school to school. In a minority of cases, the Welsh Baccalaureate is treated as a core subject, and the co-ordinator has a similar status to the leaders of English, Welsh and mathematics. However, in many schools, Welsh Baccalaureate co-ordinators are unable to hold effective meetings. This is because most staff who teach the Welsh Baccalaureate also teach other subjects and prioritise departmental meetings in these instead.
- 156 In a minority of schools, the Welsh Baccalaureate is suitably integrated into whole-school self-evaluation processes. However, only a minority of Welsh Baccalaureate co-ordinators gather first-hand information from lesson observations, scrutiny of pupils' work or seeking pupils' views. Furthermore, only a few schools undertake a sufficiently thorough analysis of pupil performance in the qualification. For example, they do not evaluate the performance of different groups of pupils well enough. This makes it difficult for them to identify weaknesses and develop precise strategies to improve pupils' outcomes.
- 157 The robustness of line management arrangements in relation to the Welsh Baccalaureate is too variable. In many schools, the Welsh Baccalaureate co-ordinator meets regularly with a member of the senior leadership team. In general, these meetings focus suitably on pupil progress and the quality of provision. However, in many instances, shortcomings in the quality and accuracy of self-evaluation evidence make it difficult for senior leaders to hold Welsh Baccalaureate co-ordinators to account fully for their role.



- 158 In nearly all cases, staff deployed to deliver the Welsh Baccalaureate come from a wide range of subject backgrounds. In a minority of schools, senior leaders have made it a high priority to select staff with the appropriate experience, expertise and enthusiasm to deliver the course effectively. In addition, they endeavour to plan the timetable so that there is continuity in staffing from year to year. This helps them to secure good quality teaching and planning of the course, has a positive impact on staff morale and contributes to strong pupil engagement in lessons. However, in the majority of schools, deployment of staff to deliver the Welsh Baccalaureate is primarily based on timetable availability. This means that there is too much variation in the enthusiasm and expertise among teachers delivering the course. In a minority of schools, deployment of staff to the Welsh Baccalaureate course has too low a priority. This often results in a lack of continuity in staffing or classes being split between two or more teachers. Both of these consequences have a negative impact on pupil engagement and the standard of work they produce.

### **Case study 13: Ysgol Gymraeg Ystalyfera – Bro Dur – leadership of the Welsh Baccalaureate qualification**

Ysgol Gymraeg Ystalyfera Bro Dur is a Welsh-medium, all-age school for pupils aged between 3 and 19 years. It serves the areas of Neath, Port Talbot and south Powys. Around 12% of pupils are eligible for free school meals.

Leaders place a high value on the qualification. The drive, vision and enthusiasm of the subject lead, supported by the senior leadership team, are an integral part of the school's success in the delivery of the qualification. The school prioritises staffing and chooses Welsh Baccalaureate teachers carefully to ensure experience, knowledge and ownership of the qualification.

The school allocates sufficient time for the department to plan as a team. As a result, all staff understand well the requirements of the specification, and mark schemes of work sufficiently to plan effectively for all levels of ability. The school schedules meetings and time during training days to moderate work and monitor pupils' progress as a team. The team scrutinises pupils' work within these meetings to evaluate standards. Importantly, the department is a part of whole-school self-evaluation procedures, such as lesson observations and the evaluation of departmental documentation.

Setting alongside other core subjects allows for appropriate planning, tailored to individual needs, and for teachers to plan experiences that provide additional challenge where necessary. Leaders also plan additional or tailored experiences, such as excursions for low-ability classes to local markets to see 'Business and Enterprise' in real-life situations.

The school provides parents with valuable information during parents' evenings and in its prospectus. The Welsh Baccalaureate team are

present in parents' evenings in order to give appropriate feedback and targets. The department reports on pupils formally by means of interim and full reports.

As a result of the strategies listed above, the Welsh Baccalaureate qualification has credibility and status within the school and among parents. Nearly all pupils are positive about the course. Standards are consistently high and 33.3% of pupils attained 'Distinction' in their individual project.

### Further education colleges

- 159 Overall, colleges have responded well to the recommendations of the Review of Qualifications, and to the revised GCSE and Welsh Baccalaureate specifications. Senior leaders are committed to the importance of raising learning literacy and numeracy skills and allowing learners to access these important 'passport' qualifications.
- 160 In most colleges, roles, responsibilities, and lines of accountability in relation to the GCSEs are clear. A senior manager has strategic oversight and there is an appropriate faculty and middle leadership structure – typically a 'faculty of skills' – to deliver GCSEs and their preparatory programmes. Strategic planning takes clear account of the scale and implications of the recommendations of the review and of recent Welsh Government guidance.
- 161 Nearly all colleges have made appropriate investment in recruiting new staff and training existing staff to deliver resit GCSE English language, mathematics and mathematics-numeracy, and the preparatory courses that allow learners from lower starting points to access them.

#### **Case study 14: Grŵp Llandrillo Menai – professional development and staffing**

Grŵp Llandrillo Menai is a further education institution formed in 2012 through mergers between Coleg Menai, Coleg Llandrillo and Coleg Meirion-Dwyfor. The college covers a large area across north west Wales, with a total of 13 campuses across the counties of Anglesey, Conwy, Denbighshire and Gwynedd.

Following the introduction of the new GCSEs in English, mathematics and mathematics-numeracy, leaders at Grŵp Llandrillo Menai carried out a scoping exercise to establish the number of learners they would be teaching and supporting through the new qualifications. In addition, they reviewed the number of staff employed by the college who taught and supported in these subjects. Their findings showed that there would be a considerable shortfall in qualified and experienced teachers and that this would present a challenge to meeting the demand.

The college decided to address the issue through a number of approaches to increase the number of teaching staff. These included the recruitment of experienced GCSE teachers; upskilling current staff, particularly those

teaching essential skills and basic skills; and offering all staff at the college the opportunity to train as GCSE teachers. In addition, the college reviewed its middle management positions and recruited co-ordinators for English and for mathematics-numeracy.

Uptake of the new positions was very positive. A number of teachers were recruited from secondary schools, existing staff took the opportunity to upskill and a few staff from areas such as administration and learner support volunteered for training. As a result, the new GCSE English and mathematics-numeracy teams include staff with a wide and complementary range of teaching experience. Teachers from secondary schools have brought their experience of the qualifications and valuable teaching strategies. Teachers from essential skills and basic skills backgrounds have brought their expertise in meeting the needs of a wide range of learners and offering alternative strategies for learning. To support the teachers, the college has commissioned a training company to work with them to develop their skills further.

As a result of these strategies, many learners at the college are gaining new skills rapidly, and consolidating existing skills well.

- 162 Most colleges have GCSE English and mathematics co-ordinators who work well with their teams of specialists, and produce useful schemes of work and shared teaching and learning resources.
- 163 Through Colegau Cymru, colleges have collected a range of useful data relating to GCSE pass rates, which they have shared and use effectively to benchmark with each other and evaluate the success of their provision. Nearly all colleges produce specific skills self-assessment reports and quality development plans. These are generally useful documents, which help focus managers and teachers on improving provision in GCSEs and their preparatory programmes. However, the change in focus towards standalone GCSE delivery has reduced colleges' attention on the extent to which learners practise and develop their literacy and numeracy skills through their main vocational programmes.
- 164 Colleges have recently reduced the extent of their Welsh Baccalaureate provision at Foundation and National level. Partly, this is in response to guidance from the Welsh Government. However, this reduction has also been driven by concerns about:
- learners potentially repeating the qualification as they move from school to college and then through college
  - the time consuming nature of the assessment ,which means that learners' opportunities to practise and develop their skills before being assessed are limited
  - low parent and employer recognition of the qualification
  - a lack of clarity from the Welsh Government about the policy of 'universal adoption' of the Welsh Baccalaureate
  - a lack of clarity and communication from the WJEC about issues such as proxy rules, and the support services provided

165 Most colleges have appropriate strategic and curriculum planning process in place to support the Welsh Baccalaureate. Senior managers set relevant targets for recruitment and outcomes. Curriculum area managers are responsible for delivery of the qualification within their areas. Nearly all colleges have a Welsh Baccalaureate co-ordinator who works well to support staff, develop curriculum resources and oversee cross-college standardisation. In a few cases, self-assessment processes do not give a sufficiently detailed or coherent picture of the quality of teaching, or of learning in Welsh Baccalaureate classes and, as a result, colleges miss opportunities to share good practice or to identify weakness in teaching.

### Support from the WJEC

166 In a majority of cases, feedback from schools indicates that there has been suitable support from the WJEC in preparing for the new specifications. Feedback about support and training courses for Welsh language and the Welsh Baccalaureate is particularly positive. However, in a minority of instances, departments considered the support and training less effective. In general, their criticisms refer to a lack of clarity around assessment, insufficient exemplification of standards and contradictory advice in consecutive courses. Many schools cite cost of the training courses and staff cover as barriers to full participation in training.

167 Many schools have made good use of the valuable bank of past questions on the WJEC's website. In a minority of cases, schools thought that the specimen papers offered did not accurately reflect the expectations in the first set of actual examinations. A few schools felt that exemplar materials for the new Welsh Baccalaureate were not provided in time.

168 The majority of schools appreciate the WJEC subject examiners' reports. They use this information, together item level data, well to identify areas for improvement and make subsequent changes to their teaching.

169 Feedback from colleges was less positive than that from schools. On the whole, colleges expressed concern that communication and information exchange with the WJEC was slow and lacked clarity.

### Support from the regional consortia

170 There has been a wide range of support offered to schools by the regional consortia in preparation for the new GCSEs and Welsh Baccalaureate Qualification, for example the creation of sample materials available on Hwb, sample timetabling models and sample schemes of work. In addition, all consortia have organised useful regional networks of professional practice.

171 In the majority of cases, schools are very positive about the strong support provided by the regional consortia. They identify clearly how the consortia have been helpful in creating and sharing resources, often through Hwb. Many subject leaders cite very useful, specific support, for example challenge advisers and subject advisers modelling good practice, such as on how to teach synthesis. Most middle leaders benefit from the informal networking opportunities provided by subject leader meetings arranged by the consortia. However, only a minority of mathematics departments have received effective levels of direct support by a subject specialist adviser.

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## Evidence base

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The findings and recommendations in this report draw on:

- visits to 13 secondary schools, and three further education colleges
- evidence gathered from focused activities during five core inspections in Autumn 2017
- evidence from inspection since 2010
- interviews with WJEC subject officers
- interviews with regional consortia advisers
- examination outcomes at the end of key stage 4

Schools and colleges were selected following an analysis of data, consideration of inspection findings and feedback from HMI. The majority of the schools and all of the colleges visited were judged good or excellent for standards in core inspections since 2010. Otherwise, the sample is as diverse as possible, based on a proportionate number of English-medium and Welsh-medium schools, geographical location and socio economic factors. The sample also includes a small number of curriculum pioneer schools.

The visits included:

- interviews with senior leaders and subject leaders
- lesson observations to evaluate quality of teaching and learning in English, Welsh, mathematics, mathematics-numeracy and Welsh Bacalaureate lessons
- meetings with learners to discuss their work and to gather their views on the quality of provision in their school or college
- scrutiny of school or college documents, including the most recent school, college and departmental self-evaluation reports and improvement plans
- information gathered from core secondary school and college inspections since 2010

Estyn would like to thank the following schools and colleges that supported this thematic review:

Welshpool High School, Powys  
 Willows High School, Cardiff  
 Cardiff High School, Cardiff  
 Y Pant, Rhondda Cynon Taf  
 West Monmouth School, Monmouth  
 John Frost School, Newport  
 St Joseph's RC High School, Newport  
 Ysgol Bryn Elian, Conwy  
 Ysgol Gyfun Gwyr, Swansea  
 Ysgol Gyfun Ystalyfera, Neath Port Talbot  
 Ysgol Gyfun Gwynllyw, Torfaen  
 Ysgol Dyffryn Aman, Sir Gaerfyrddin

Ysgol Bro Hyddgen, Powys  
Ysgol Llanhari, Rhondda Cynon Taf  
Chepstow Comprehensive School, Monmouthshire  
Castell Alun High School, Flintshire  
Ysgol Maes-y-Dderwen, Sir Gaerfyrddin  
Ysgol y Moelwyn, Gwynedd  
St. Joseph's Catholic and Anglican High School, Wrexham  
Coleg Sir Gâr  
Pembrokeshire College  
Grŵp Llandrillo Menai



## Glossary

<b>Term</b>	<b>Definition</b>
DIRT	An acronym that stands for 'Dedicated Individual Reflection Time' where pupils respond to detailed marking, which includes challenging questions, comments by their teachers
Exposition	A detailed description and explanation of an idea or theory
GLH	Guided learning hours; an estimate of the amount of time needed to successfully deliver a particular course
Hwb	HWB and HWB+ are Welsh Government initiatives that provide practitioners and learners with access to shared online resources.
Learning Records Service	A service run by the government that allows learners' attainments to be tracked over time
Level 1 qualification	Grades A*-G at GCSE or equivalent
Level 2 qualification	Grades A*-C at GCSE or equivalent
Level 3 qualification	Grades A*-G at A-level or equivalent
Linear course	A qualification with assessments carried out at only the end of the period of study
PISA	Programme for international student assessment administered by the OECD
PISA style questions	Questions in PISA surveys demand that pupils undertake a great deal of reading and use their reasoning skills and subject understanding to draw conclusions.
Proxy qualifications	Qualifications that can be used in place of GCSE mathematics and English for the Foundation or National Bac post-16
WEST	'Wales essential skills toolkit'; this is an online suite of tests to determine learners' level of skill acquisition in literacy and numeracy.
WJEC	Wales' examination board, previously known as the Welsh Joint Education Committee

**Numbers – quantities and proportions**

nearly all =	with very few exceptions
most =	90% or more
many =	70% or more
a majority =	over 60%
half =	50%
around half =	close to 50%
a minority =	below 40%
few =	below 20%
very few =	less than 10%

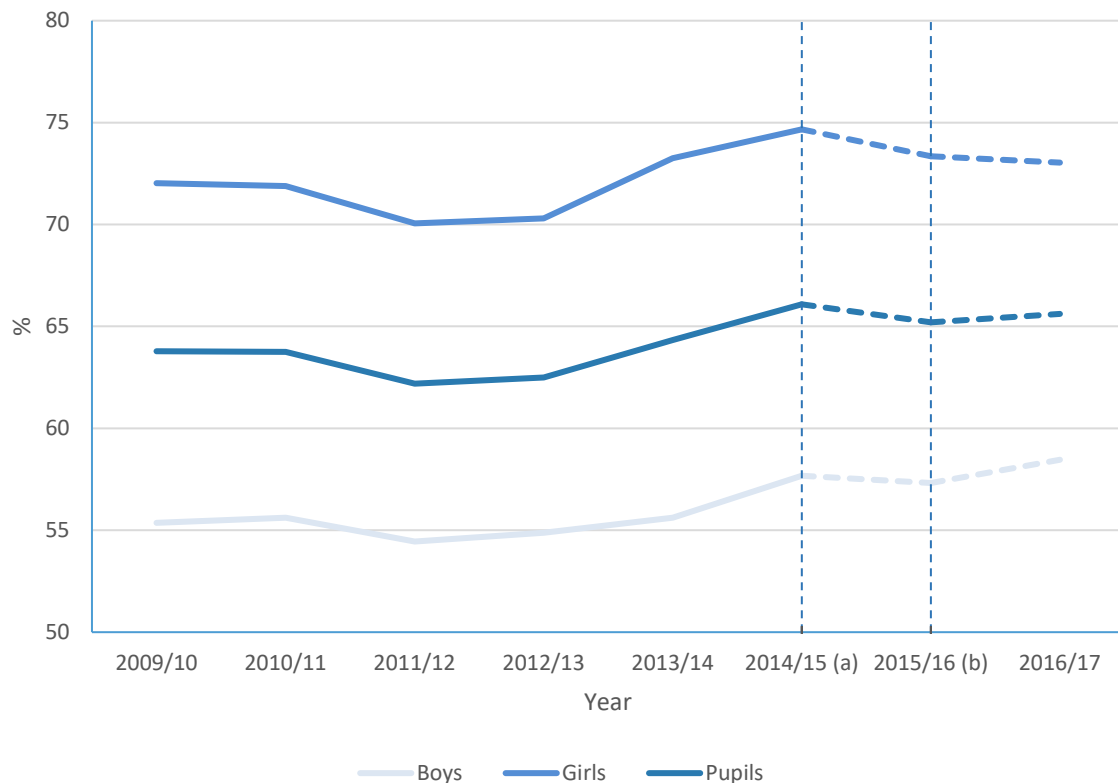
## Appendix

### National data from examinations<sup>1</sup>

This appendix considers the outcomes from GCSE examinations and the Welsh Baccalaureate Qualification since 2010. It is not possible to directly compare outcomes prior to 2017 with those after this date as there have been substantial changes to the curriculum and to the nature of the data collected. Any analyses based on these outcomes should be made with caution.

### Figure 1: GCSE English language examination results

#### The percentage of pupils attaining A\*-C grades since 2010



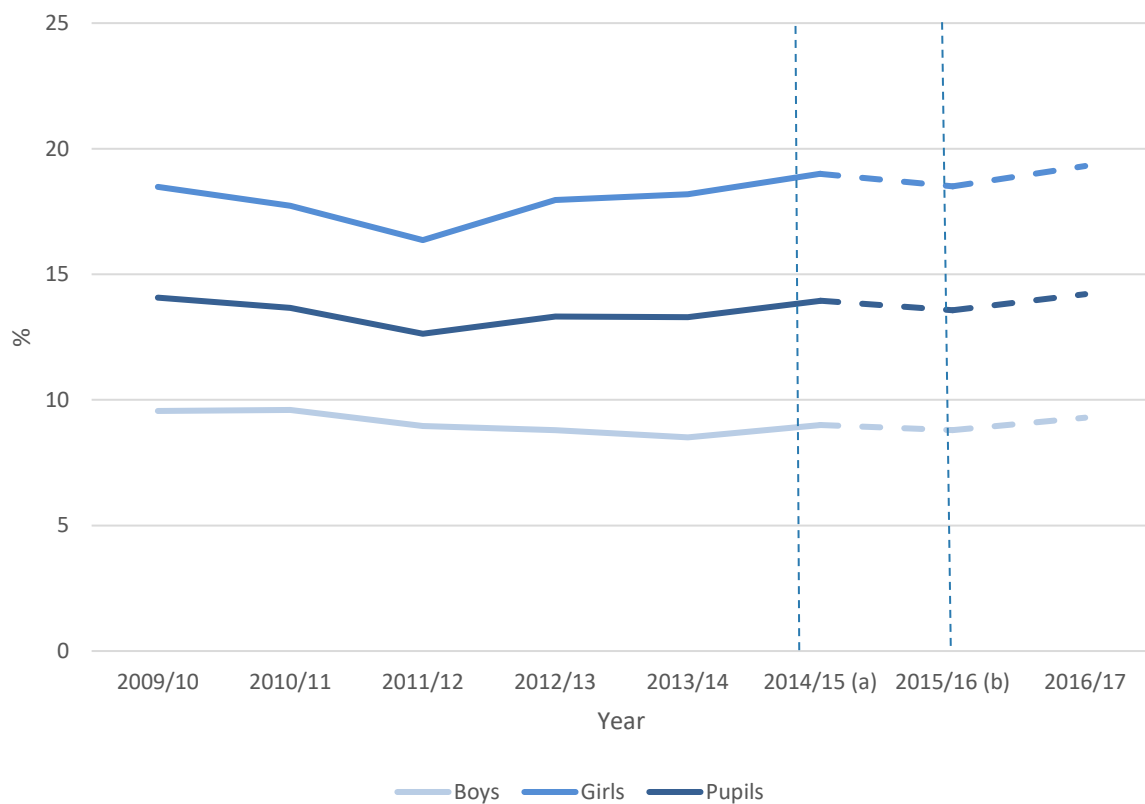
- (a) From 2015-2016, the cohort is based on Year 11. Up to 2014-2015 the cohort was based on pupils aged 15 at the start of the academic year.  
 (b) From 2016-2017, only the new specification for GCSE English language is included.

Source: Welsh Government (2017a)

<sup>1</sup> Please note that not all graphs have the same scales and not all begin from 0 on the y axis

## Figure 2: GCSE English language examination results

### The percentage of pupils attaining A\*-A grades since 2010



- (a) From 2015-2016, the cohort is based on Year 11. Up to 2014-2015 the cohort was based on pupils aged 15 at the start of the academic year.
- (b) From 2016-2017, only the new specification for GCSE English language is included.

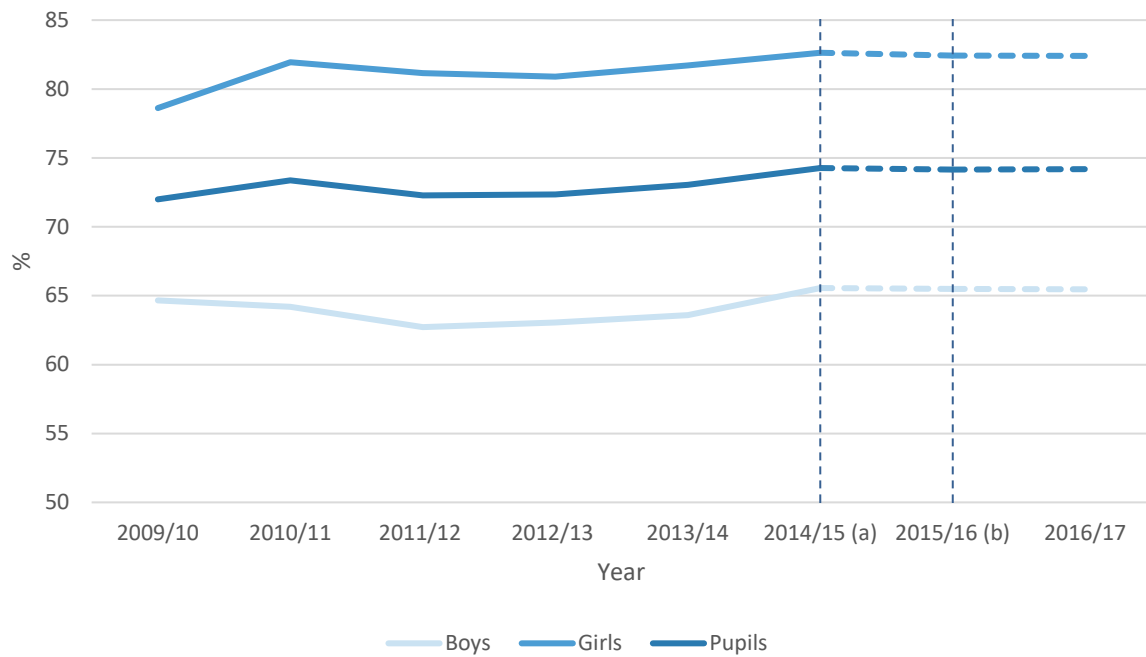
Source: Welsh Government (2017a)

The proportion of pupils gaining A\*-C grades has fluctuated a little since 2009-2010. There is a fall in attainment following a change in the specification in 2012 and a gradual increase until 2015-2016. However, the introduction of the most recent GCSE specification has not altered the proportion of pupils gaining an A\*-C grade. Nationally, the proportion of boys gaining A\*-C grades is 14.6% points lower than that of girls in 2016-2017. This is not notably different from previous years. The proportion of pupils eligible for free school meals gaining an A\*-C grade was 47.1% in 2016 and 38.5% in 2017. However, the data for this group from 2010 to 2016 includes English literature outcomes, whereas the data for 2017 does not (Welsh Government, 2017a; see figure 1).

The proportion of pupils gaining A\*-A grades has fluctuated little since 2010 (see figure 2). It is not possible to directly compare outcomes prior to 2017 with those after this date. The introduction of the new GCSE specification has not altered this proportion notably (Welsh Government, 2017b; figure 2).

### Figure 3: Welsh language GCSE examination results

#### The percentage of pupils attaining A\*-C grades since 2010

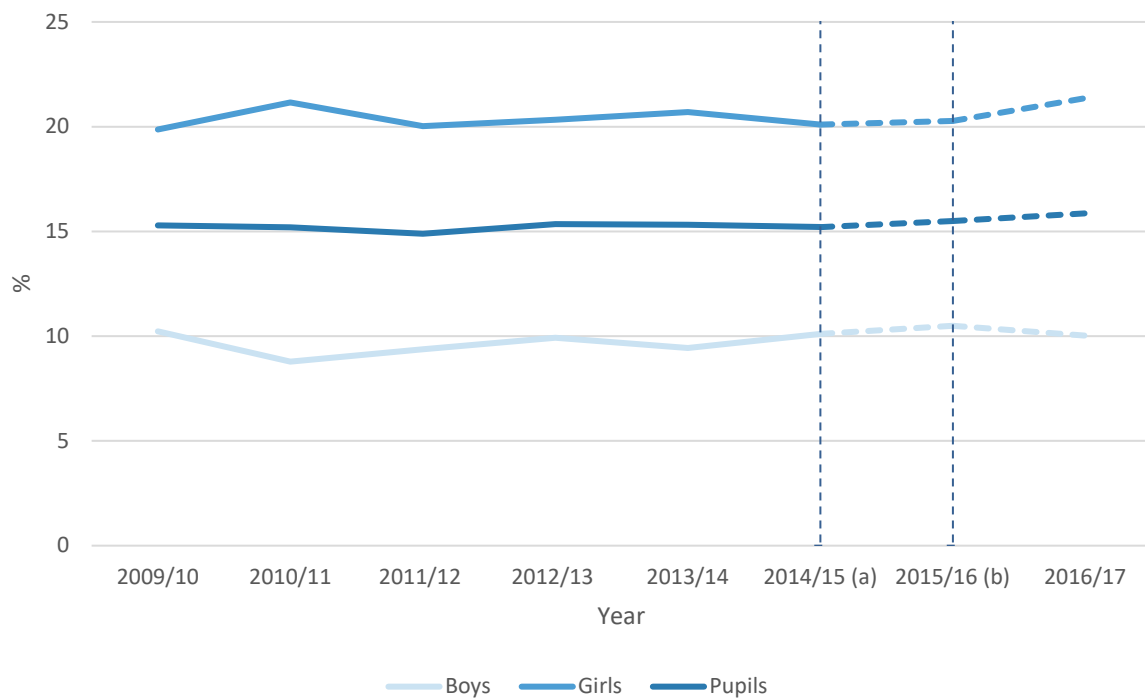


- (a) From 2015-2016, the cohort is based on Year 11. Up to 2014-2015 the cohort was based on pupils aged 15 at the start of the academic year.
- (b) From 2016-2017, only the new specification for GCSE Welsh language is included.

Source: Welsh Government (2017a)

## Figure 4: Welsh language GCSE examination results

### The percentage of pupils attaining A\*-A grades since 2010



- (a) From 2015-2016, the cohort is based on Year 11. Up to 2014-2015 the cohort was based on pupils aged 15 at the start of the academic year.
- (b) From 2016-2017, only the new specification for GCSE Welsh language is included.

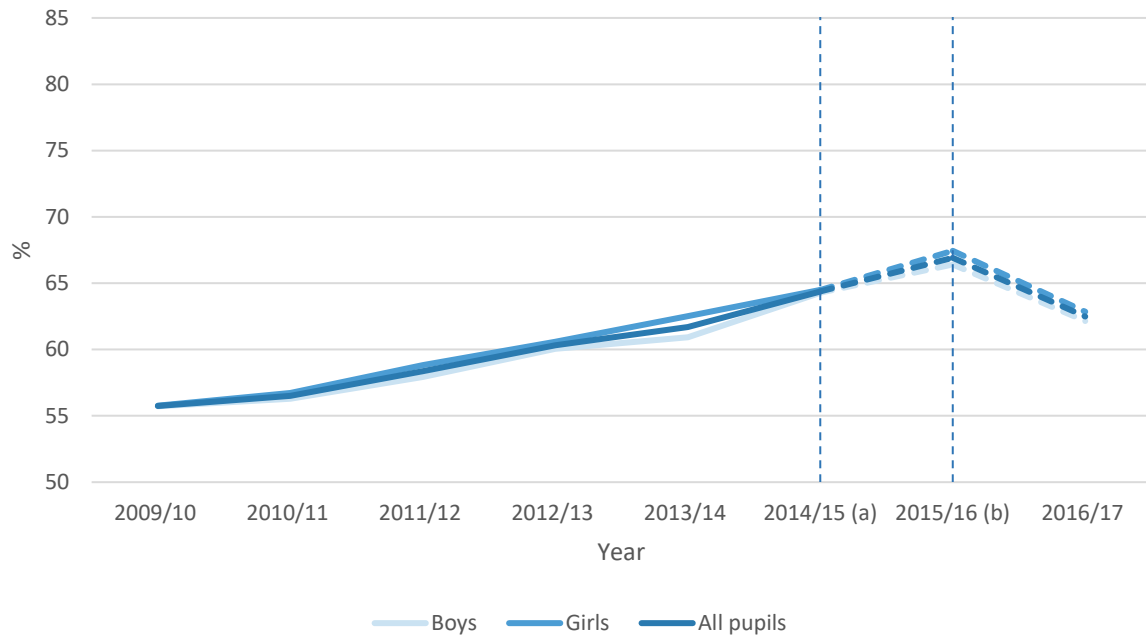
Source: Welsh Government (2017a)

There has been a general trend of improvement in the proportion of pupils attaining grades A\*-C since 2010 (see figure 3). The introduction of the new specification has not changed this proportion. Nationally, the proportion of boys gaining A\*-C grades is 16.9% points lower than that of girls. This is not notably different from outcomes previous years. The proportion of pupils eligible for free school meals attaining grades A\*-C is 53.8%. This proportion is close to that in previous years. There have been only very small fluctuations in the proportion of pupils attaining grades A\*-A since 2010. This proportion has remained the same since the introduction of the new specification (Welsh Government, 2017a; figure 4).



**Figure 5: Examination results (best of) – mathematics (and mathematics-numeracy GCSE in 2017)**

**The percentage of pupils attaining A\*-C grades since 2010**

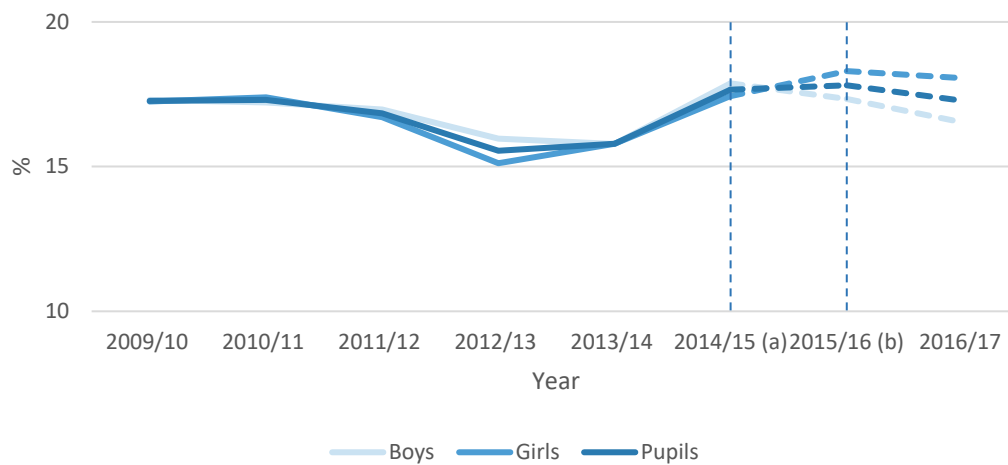


- (a) From 2015-2016, the cohort is based on Year 11. Up to 2014-2015 the cohort was based on pupils aged 15 at the start of the academic year.
- (b) From 2016-2017, only the pupil's best outcome in either the new specification for GCSE mathematics or mathematics-numeracy is included.

Source: Welsh Government (2017a)

**Figure 6: Examination results (best of)**

**The percentage of pupils attaining A\*-A grades in GCSE mathematics (and mathematics-numeracy in 2017) since 2010**

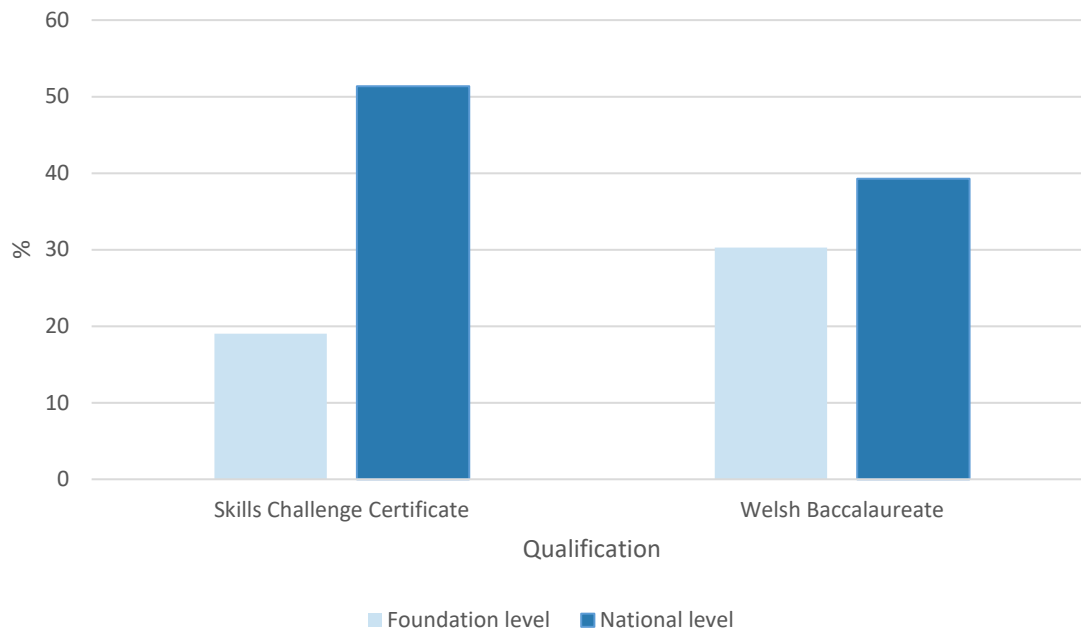


- (a) From 2015-2016, the cohort is based on Year 11. Up to 2014-2015 the cohort was based on pupils aged 15 at the start of the academic year.
- (b) From 2016-2017, only the pupil's best outcome in either the new specification for GCSE mathematics or mathematics-numeracy is included.

Source: Welsh Government (2017a)

Between 2010 and 2016, the proportion of pupils attaining an A\*-C grade in mathematics increased steadily. The introduction of the new GCSEs has had a substantial impact on pupils' attainment overall and the proportion gaining an A\*-C grade in either mathematics or mathematics-numeracy declined markedly in 2017 (see figure 5). The gap between the attainment of boys and girls remains very small. The proportion of pupils eligible for free school meals gaining an A\*-C grade dropped from 43.6% in 2016 to 38.3% in 2017. The proportion of pupils attaining an A\* or A grade is similar to those attained between 2010 and 2016 (see figure 6). A slightly higher proportion of pupils sat GCSE mathematics than did GCSE mathematics-numeracy. The proportion of pupils gaining grades A\*-C (59% in mathematics and 57% in numeracy-mathematics) and A\*-A (18% in mathematics and 17% in numeracy-mathematics) was very similar in both specifications (Welsh Government, 2017a).

**Figure 7: Outcomes in the Skills Challenge Certificate and Welsh Baccalaureate in 2017**



Source: Welsh Government (2017b)

In 2017, the first cohort of Year 11 pupils completed the revised Welsh Baccalaureate Qualification. Around 76% of pupils were entered for the skills challenge certificate at either level 1 or level 2. A higher proportion of girls (79%) were entered for the qualification than boys (73%). Only around two-thirds of pupils eligible for free school meals were entered for the skills challenge certificate (Welsh Government, 2017b).

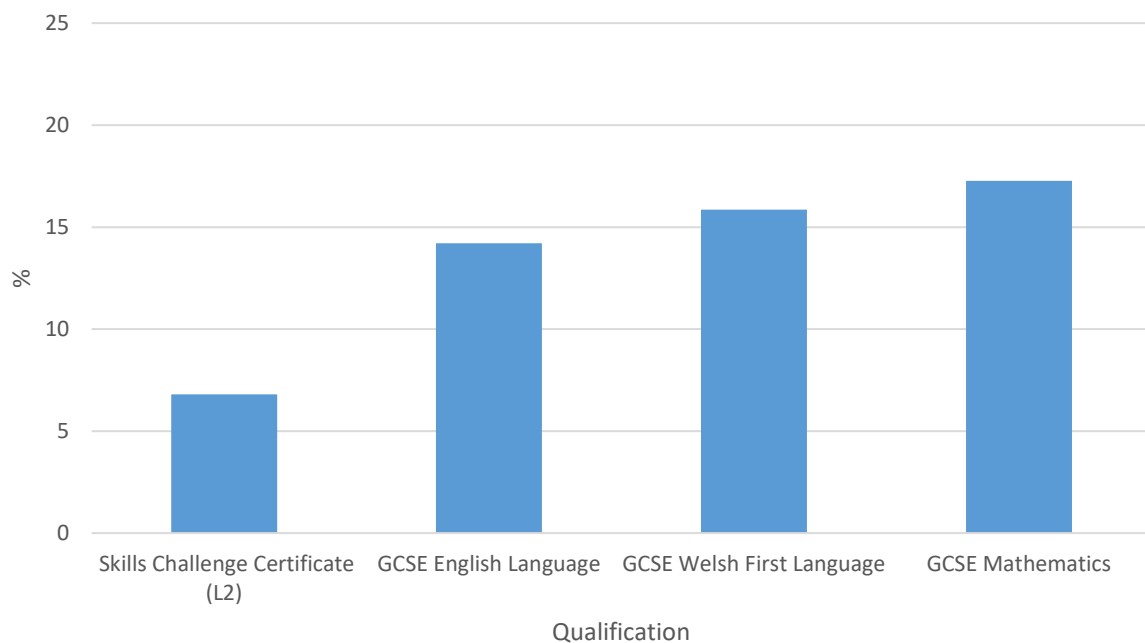
Just over half of pupils successfully completed the skills challenge certificate at level 2 and just under 40% achieved the National (level 2) Welsh Baccalaureate overall. Just less than a fifth of all pupils in Year 11 achieved the skills challenge certificate at level 1. Around 30% achieved the Foundation (level 1) Welsh Baccalaureate. This is higher than the proportion gaining the skills certificate because of a very few pupils not gaining the supporting qualifications necessary for accreditation at National level. At both level 1 and level 2, only a very small number of pupils successfully completed the skills challenge certificate but did not achieve the Welsh Baccalaureate qualification overall. Around 8% of pupils who entered the skills challenge certificate did not complete it successfully and therefore did not achieve the Welsh Baccalaureate at either level (Welsh Government, 2017b).

Pupils' performance at the higher grades does not compare well to that in English, Welsh first language or mathematics. Only a very few pupils (5.3%) achieved an A\* or A grade in the level 2 skills challenge certificate. This is a substantially smaller proportion than achieved similar grades in English, Welsh language and mathematics (see figure 8). Less than 1% of pupils achieved an A\* grade in the skills challenge certificate, which is substantially less than in English and mathematics (Welsh Government, 2017b).

Girls out-performed boys in the Welsh Baccalaureate and skills challenge certificate. Around 60% of girls passed the level 2 skills challenge certificate, compared with around 43% of boys (Welsh Government, 2017b). The difference between boys' and girls' performance was particularly notable at A\*-A, where the proportion of girls achieving the higher grades was more than three times larger than that of boys. This gap is greater than that in GCSE English language, Welsh language or mathematics where the gap is very small.

Around a third of pupils eligible for free school meals passed the skills challenge certificate at level 2, and just over half of them achieved the certificate at either level. Just over one and a half percent achieved an A\* or A grade. The gap in performance between pupils who are eligible for free school meals and those who are not eligible achieving the certificate at either level is around 19 percentage points, which is much narrower than the gap in performance in other indicators, such as the level 2 threshold, including English or Welsh and mathematics (32.3%) (Welsh Government, 2017b).

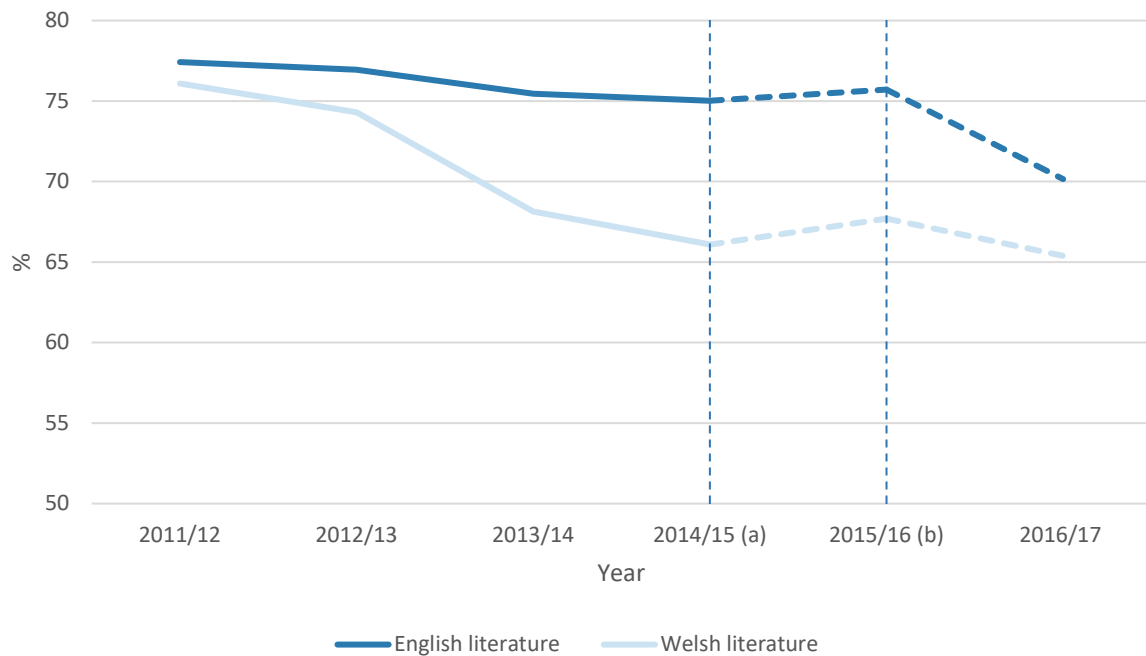
**Figure 8: Outcomes at A\*-A in 2017 in English language, Welsh language, mathematics and the Skills Challenge Certificate**



Source: Welsh Government (2017b)

**Figure 9: The proportion of pupils sitting English literature and Welsh literature GCSE examinations in Year 11 since 2012**

Note that the denominator for Welsh literature is the number of 15-year-olds / pupils in Year 11 who entered Welsh language, rather than the total number of 15-year-olds / Year 11 pupils.



- (a) From 2015/2016, the cohort is based on Year 11. Up to 2014/2015 the cohort was based on pupils aged 15 at the start of the academic year.
- (b) From 2016-2017, literature qualifications did not count towards the literacy element of the Level 2 inclusive.

Source: Welsh Government (2017b)

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